Published every Saturday by the Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa., with editorial and executive offices: 30 Church Street, New York, N. Y., and 105 West Adams Street, Chicago, Ill.

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The Railway Age is a member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.).

Subscriptions, including 52 regular weekly issues, and special daily editions published from time to time in New York, or in places other than New York, payable in advance and postage free. United States, U. S. possessions and Canada: 1 year, $6.00; 2 years, $10.00; foreign countries, not including daily editions: 1 year, $8.00; 2 years, $14.00.

Single copies, 25 cents each.

H. E. McCandless, Circulation Manager, 30 Church St., New York, N. Y.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

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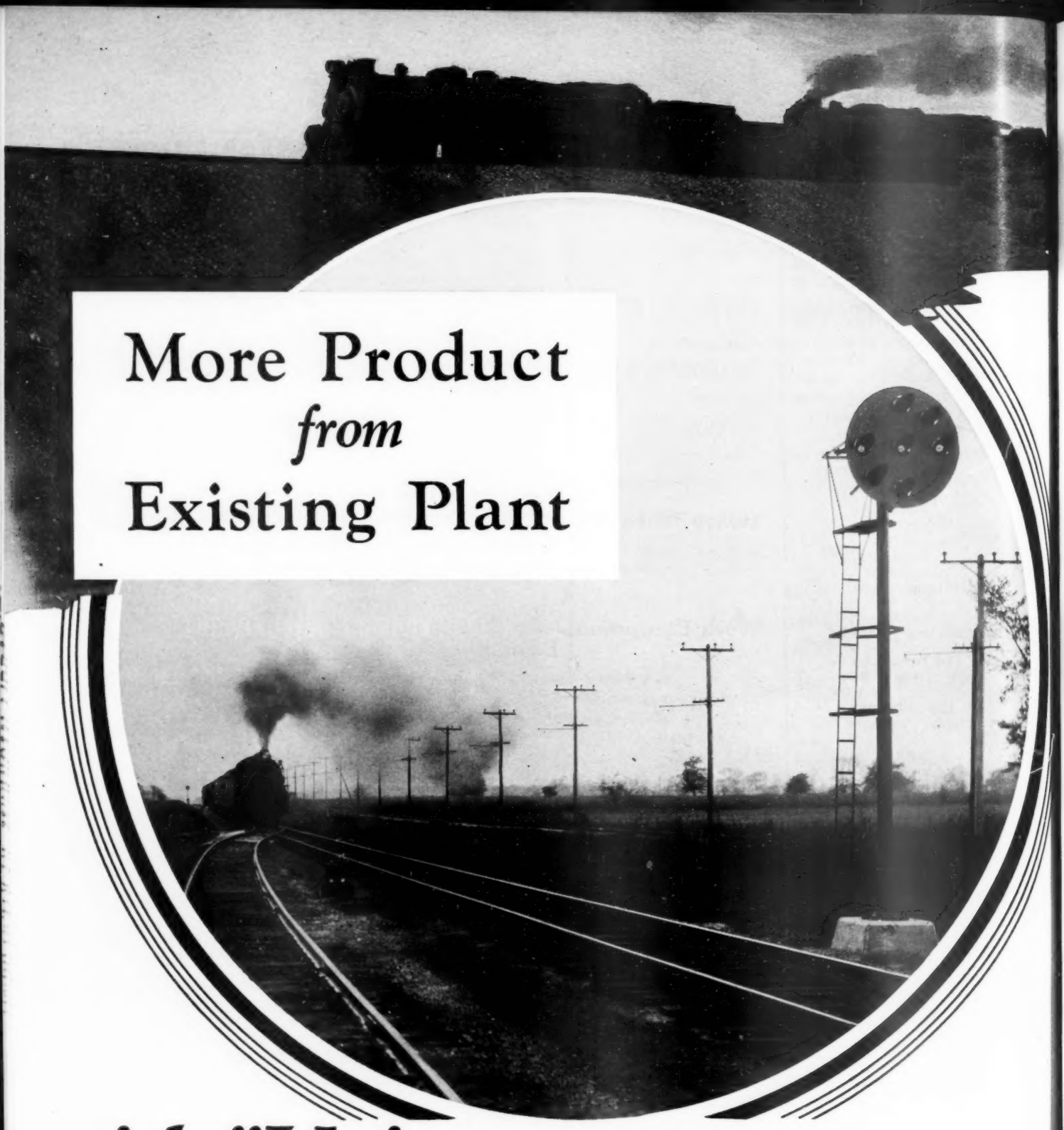

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The Crucial Railway Wage Controversy

The pending railway wage controversy, which has passed through the stage of collective bargaining into that of federal mediation, may be the most decisive event in the history of United States railways. Its outcome probably will be determined by how much unity and courage are shown by railway executives.

A. F. Whitney, president of the Brotherhood of Railroad Trainmen, has accused *Railway Age* of urging the railways to "violate the law." *Railway Age* has done no such thing, and Mr. Whitney knows it. What the *Railway Age* has done is emphasize that railway managements can get a reduction of wages while acting in strict accordance with every provision of existing law; and we now emphasize it again. If mediation fails the mediators will propose arbitration which either or both sides can legally reject. The President, under the Railway Labor Act, could then appoint an Emergency Board. It would have to make its report and recommendations within thirty days; and both parties would have to maintain the status quo for thirty days thereafter. Then, either the employees or the railways could reject the recommendations made, and the railways could legally put the proposed 15 per cent reduction into effect.

What Will Be the Outcome?

Various reports are being circulated regarding the probable outcome. Reports from Washington have been that there will be only a small reduction or none. One report has been that the railways will stop the wage movement to prevent C. I. O. from getting their employees. The labor leaders have threatened to call a strike rather than accept a reduction. As this paper said last week, we know of no reason why the railways should fear C. I. O. because its leaders could hardly make more extreme demands or press them harder than the leaders of the railway unions. A general railroad strike, or strikes on a number of railroads selected for strategic reasons, would be bad for all concerned.

But the most important question confronting railway management is what will happen to the railroad industry, strike or no strike, if it does not soon get a reduction of wages. Faced with that question, railway management as a whole has not yet shown any disposition to back down. In the first five months of 1929 the railways earned $457,000,000 net operating income. In the first five months of 1932 they earned $99,500,000, and in the first five months of 1933 they earned $93,400,000. In the first five months of 1937 they earned $238,000,000 and in the first five months of 1938 they earned only $45,300,000. Owing to this terrific decline in their net operating income they incurred in the first five months of 1938, after operating expenses, taxes and fixed charges, a deficit of $165,300,000. Without (1) an early and large expansion of business or (2) an early and substantial reduction of operating costs virtually the entire railroad industry would become bankrupt; and there is as yet no evidence of a willingness by railway management to accept general bankruptcy without a struggle.

Does Prospective Business Warrant Present Wages?

Railway managements are being urged by labor leaders and others sharing their economic views to believe that if wages are maintained there will soon occur an improvement in business that will make present wages less burdensome, but that if wages on the railways and in other industries are reduced there will result a reduction of mass purchasing power that will hinder improvement in business. The prediction of improvement in business is based largely on the government's lending and spending program. The *Railway Age* repeatedly has exposed the fallacy of the argument that high wages necessarily increase mass purchasing power; and experience in this country for five years has refuted the theory that huge government lending and spending helps business excepting temporarily, if at all.

Railroad freight loadings indicate that the total volume of production and commerce is now almost 45 per cent less than it averaged in the five years 1925-1929, inclusive, and about 24 per cent less than in the summer of 1937 after the "recession" had been under

way for two and one-half months. Freight loadings from the middle of May to the middle of July indicated that business was improving; but since then their trend has been less favorable.

There is, unfortunately, no reason for believing that business will substantially improve during the rest of this year unless economically sound measures are adopted by government, business and labor to improve it; and until it does greatly improve the railways cannot stand their present high unit costs of operation. Measures for improving business would include reduction of wages on the railroads and in some other industries.

How About Wages in Other Industries?

This paper has been accused by railway labor leaders during the wage conferences of advocating reductions of railway wages while avoiding advocacy of reduction of wages and prices by the industries from which the railways buy equipment, materials and fuel, and from which this paper gets its advertising. We have repeatedly expressed criticism of advances in wages and prices made in other industries as premature and excessive; and we meet the challenge of the labor leaders by expressly saying now that in our opinion the industries that have hindered recovery by prematurely and excessively advancing wages and prices include those selling manufactured products and fuel to the railways, and that there is just as much reason why wages in those industries should be reduced as why railway wages should be reduced. Improvement in business will not be caused by wishful thinking or watchful waiting. It will be caused only by definite and energetic efforts to improve it. The trouble with it now is lack of sufficient effective demand for its products and services; and demand for them is not going to be increased by maintaining higher wages and prices than industry's customers can or will pay.

During the negotiations labor leaders have contended that present wages should not be reduced because management should pay "living wages" even if this prevents earning a penny for dividends or even interest. That raises a question of morals, as well as some questions of economics.

Management and the Security-Owners

The question of morals is as regards the duty of railway management to railway security-owners. Management does not own the railroads. It is employed by their owners, the stockholders. Every railway executive accepted his employment with the tacit understanding between himself and the security-owners that he would exert himself intelligently and courageously to earn a fair return for the security-owners. Consequently, it would be a breach of trust for any railway executive to agree voluntarily to wages that he considered excessive under the economic conditions existing, with the certain result of preventing the security-owners from getting such a return as he considered them entitled to under those conditions.

Management has its duty to employees; but it cannot honorably yield to demands from them or their representatives in disregard of its voluntarily assumed duty to security-owners. Labor leaders know this as well as anybody; and their invitation to railway managers to unite with them in despoiling the security-owners is an insult. During any given period there is left, after paying other necessary operating expenses and taxes, an ascertainable part of gross earnings that can be divided between employees and railroad security-owners. If management fails to do everything it reasonably can to make this division fair, it fails in its duty either to the employees or the security-owners.

What Is a "Living Wage"?

The demand of labor leaders for a "living wage" sounds reasonable; but it does not settle, but merely raises, the question of what a living wage is. In 1929 the average hourly earnings of railway employees were 67.5 cents, and their average weekly earnings were $32.68. There was not in that year any widespread controversy in which it was claimed that these averages yielded less than living wages even for the lower paid classes of employees. The 10 per cent deduction from all basic wages was in full effect from February 1, 1932, to July 1, 1934. The cost of living during this period was 20 to 24 per cent less than in 1929; and there was little or no complaint during this period that the reduced pay did not afford living wages. In the first quarter of 1938 the average hourly earnings of employees were 77.7 cents and their average weekly earnings $34.72. The cost of living was 16.6 per cent less than in 1929; and, because of this decline in the cost of living and the advances in wages, average weekly earnings of employees in the first quarter of 1938 had a purchasing power 27 per cent greater than in 1929. Obviously, if the wages paid in 1929 were living wages, which was not seriously questioned at the time, then most of the wages now in effect are much higher than mere living wages. A 15 per cent reduction would make weekly earnings average $29.51. Because of the 16.6 per cent lower cost of living this amount would have a purchasing power about 8 per cent greater than the average weekly earnings of $32.68 made in 1929.

If the wages of 1929 were living wages, how could wages affording a purchasing power 8 per cent greater than those then received be less than living wages? The total national income in 1938, and therefore the average income of all the country's people, is 40 per cent less than in 1929, and, allowing for the lower cost of living, has a purchasing power 28 per cent less than in 1929. Consequently, whether measured in money or in its purchasing power, the average railway employee, after a 15 per cent reduction in present wages, would be much better off as compared with

1929 than a vast majority of the people. And the people as a whole, either in freight and passenger rates, or in the effect produced on railway service, must and do pay railway wages.

Whom Does Management Represent?

There are really four parties involved in the current wage controversy—(1) the employees who still have their jobs, (2) the employees who have lost their jobs, (3) railway security-owners and (4) the public. The labor leaders plainly are representing, and apparently intend to continue to represent, only the employees who still have their jobs. Consequently, during the negotiations until the mediators intervened each of the three other parties either was represented by the Carriers' Conference Committee or by nobody. Who is being represented now by the federal mediators? As they are appointed by the President, it might be assumed they should represent the public. But they are assumed to try only to secure a peaceful settlement; and whether a settlement is good or bad for the public depends not only on whether it is peaceful—i.e., prevents a strike—but also on its terms. Therefore, the mediators presumably represent the public only in the sense that they try to prevent a strike; and it is easily conceivable that their efforts to prevent a strike might be successful at the cost of terms of settlement much worse for the public than a strike would be.

It follows that from the beginning of the controversy to the termination of mediation three of the parties above mentioned—the hundreds of thousands of railroad men now unemployed, the owners of railway securities and the public—will be either represented by the Carriers' Conference Committee or not represented at all. It is often said the Carriers' Conference Committee represents "management." It is appointed by management, but insofar as it is considered by management to represent management there is something wrong with management. It should be considered a part of management created intelligently and courageously to represent those that management should intelligently and courageously represent. The men still employed by the railways have chosen to be represented by the union leaders; and they are very intelligently and courageously represented by them. It follows that the constituency which, with equal intelligence and courage, should be represented by management includes the unemployed railroad men who should be employed, the owners of railway securities and the public.

Why Management Should Represent the Unemployed

Why should those who should be employed, but are not, be represented by management? Because the railroads need their work; and it is calamitous that they are not getting it. The labor leaders claim the railroads are losing nothing by present wages because they have laid off so many men their payroll has not been increased. This affords a good illustration of the feeble-minded theories of economics the prevalence of which is responsible for present economic conditions in the United States. We have talked so much and loosely about the need for increasing employment that most of us have forgotten that the purpose of employment is not merely to provide pay—that it has the much more important purpose of *getting needed productive work done;* and that any employment which does not do that is valueless. The entire population is supported by products and services resulting from the investment and use of capital and the doing of mental and manual work. The less capital is wisely invested and used, and the less mental and manual work is efficiently done, in producing things and services of value to the people, the worse off the people will necessarily be.

Now, the property of the railroads is constantly deteriorating and their ability to render enough good service is constantly declining because of their inability to employ enough men and buy enough materials for needed maintenance work, and to buy enough improved equipment to replace that being worn out. Therefore, to say that present high wages are costing the railroads nothing because their payroll has been smaller thus far in 1938 than in 1937 is the most arrant economic nonsense. To whatever extent present high wages have prevented the railroads from getting more needed work done by more employees, and from buying more needed materials and equipment, they have not only injured those they have prevented from being employed, but have injured the railways by hastening deterioration of their properties. And, whatever their causes, the longer the present drastic curtailment of railway employment and of railway buying are continued the worse it will be for the many thousands of railway men who are out of work; for the security-owners whose properties are deteriorating; for the manufacturers and their employees who should be producing more equipment and supplies for the railroads, and for the public to which the railways are daily becoming less able to render adequate and good service.

The Crucial Test of Management

The present wage controversy will subject railway management to the most critical test in its history. Lack of unity and fear of what the government might do caused management to agree last year to advances in wages for which there was then no economic justification and for the maintenance of which there would be not now the slightest justification either economic or moral. Management is threatened with strikes now as it was last year. It may later be threatened or offered promises by government, as it was last year. But what have labor leaders or government or both done since last year to warrant any confidence that

they will do anything helpful to the railways? Not a thing. What do they offer now in lieu of a reduction of wages? Not a thing. And meantime it has become more and more plain that until general business greatly improves, and railway traffic and gross earnings largely increase, the railway industry as a whole and almost every railway composing it will continue to be unable to stand their present high unit costs because these costs make ruinously narrow the margin between gross earnings, on the one hand, and operating expenses and taxes, on the other hand. The problem presented could not be anywhere near solved by scaling down indebtedness and fixed charges as labor leaders and some politicians propose; and, anyway, it cannot be emphasized too often that it is the plain duty of management to resist to the utmost the destruction of railroad investments contemplated by those who advocate the confiscatory and dishonest palliative of "scaling down."

The proposed reduction of wages would not solve the railroad problem; but it is an essential part of any solution of it from the standpoint of unemployed railroad men, of security-owners and of the public unless guarantees of a fair return largely payable from the government treasury are to be made. Labor leaders suggested such guarantees; but the administration promptly rejected them. The government has not as yet by any action whatever relieved railway managers of any part of the duty and responsibility voluntarily assumed by them of doing their utmost to maintain the physical and financial integrity of the railroad industry; and as long as that continues to be the case it will be their duty and responsibility to do all they legally can to bring all the costs of the railways, including wages, into reasonable relations with gross earnings resulting from the traffic they can get and from rates fixed for them by the government itself through the Interstate Commerce Commission.

Employees Will Break a Strike If One Is Called

To the Editor:

Texas.

There is strong belief among many of us who have watched the growth of developments on the railroads since 1920 that the outcome of the present struggle between the railroads and their employees is going to determine the future supremacy on said railroads. When I say "many," I mean those scattered through the ranks all over the country who do not subscribe to the extreme, overbearing attitude and demands of the major radical elements of the employees—with particular stress and emphasis on the four classes of train service employees known as the "Big Four."

No honest man who is familiar with labor agitation on the railroads covering a long period of time can doubt or deny that the spearhead and incubator of the constant warfare and antagonism between men and management is promoted and kept alive mainly by the perpetually hell-raising "Big Four"—that, notwithstanding they are the pampered gang to start with and always have been.

The present fight then, as it appears, is going to decide whether the people who own the railroads are going to run them or whether the employees are going to assume the control.

Mexico Sets Example

Slowly but surely the employees have been inching up and encroaching upon the rights of management and gradually usurping its functions. The end of the movement as we see it can be but one thing, namely, that if it is not stopped and the freedom of management restored to enable it to do what is necessary to run the roads at a profit, the tenacious clamor of rail labor will force the railroads into government hands. Maybe with the present politico-labor paramour set-up, the railroads will be turned over to the employees to run just like it was done in Mexico. Some still say such things "can't happen here." But in view of the trends of the present administration and things it has done it takes a lot of baseless optimism to further contend that.

There is one salient point the railroads could capitalize on in dealing with the "Big Four." Most of the other departments of rail labor have about as much love for the "Big Four" as the Comintern at Moscow has for the Vatican at Rome, and particularly the shop men. The shop forces give the "Big Four" credit for the loss of their strike in 1922 and it is still in them as big as a box car. And although they have organized since the strike the sore would be easy to open.

The Shop Men and the "Big 4"

Go around any shop or roundhouse and see what the mechanical forces will tell you about the "Big Four" when you mention labor matters in connection with them. The shop men have sworn vengeance against the "Big Four" and oodles of them have declared that if the "Big Four" ever strikes they will hasten to take their jobs. And there is no reason to believe they are joking either. Skillful manipulation should be able to use that situation to the railroads' advantage; assuming, of course, that the railroads want to bust up the "Big Four."

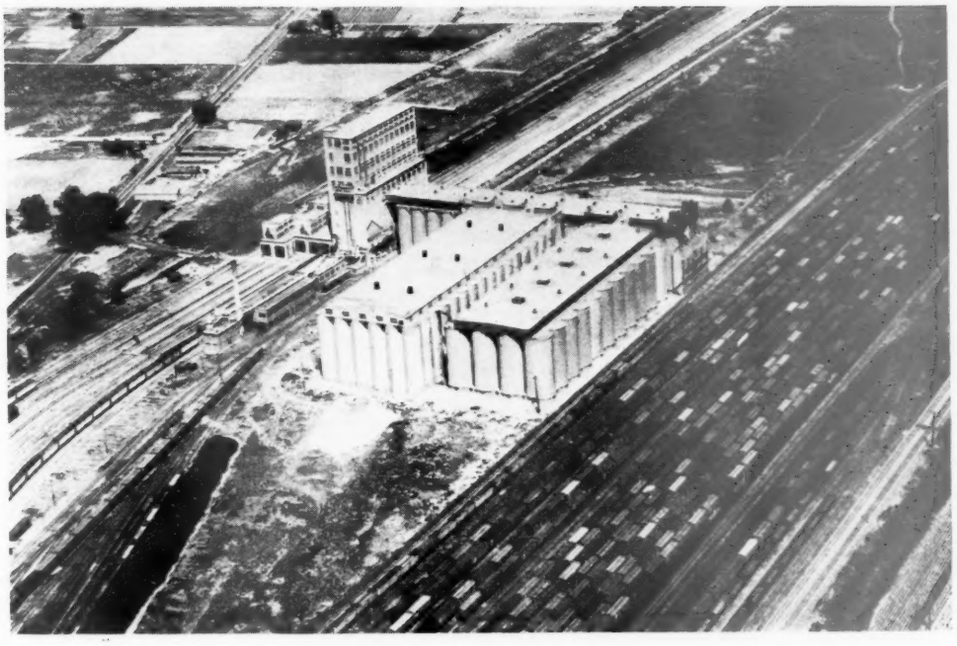
Another thing. There is bad blood among the "Big Four" themselves. The brakemen's union has split with the other three. In addition, there are many of the old heads already eligible for retirement and won't take it, thus causing many cut-off men to keep on staying on the grass where otherwise they would be working. That is not agreeing with them a bit and is getting to be a big sore spot.

Would Men Near Pensions Strike?

Still another thing. These old men who are eligible for retirement or nearing that time are not interested in going out in any strike. No, not at that end of their row. Consequently most of them would remain in a strike to help take care of things. Further, the great herd of unemployed experienced railroad men are aggrieved aplenty at the selfishness of their more fortunate "brothers" who manifest no real sympathy for their plight; a legion of whom would welcome an opportunity for revenge.

All in all there probably never will be another time when the railroads will have such a wealth of available material to break up a strike with as now. The roads have long complained and labored and groaned under the millstone of excessive labor impact. It would seem now is the time to rectify things if they mean what they say. If the railroad owners do not pool their resources and combine their power with other industrial allies and stop this growing labor oligarchy, the prospects bid fair that it will not remain much longer in their power.

Locomotive Fireman



One of the Large Grain Yards near Kansas City During the Peak Movement

Heavy Wheat Movement Without Car Shortages

Problem of handling huge grain crop solved by efficient operation

THIS year there has not been a single bushel of wheat piled on the ground because of the railways' inability to handle it. An ample supply of cars has been available throughout the harvesting season in both the winter wheat territory, extending from Texas into southern Nebraska, and in the spring wheat area, extending from Nebraska to the Canadian border.

Several factors have contributed to the accomplishment of this performance. Efficient operating methods have played their part; wet weather forced a return from the combine to the thresher and binder method of harvesting in wide areas, spreading the wheat loading over a longer period than in the last few years; also an ample supply of cars has been available constantly for loading.

Loadings Retarded

While, as will be cited later, there are certain territories where the loadings far exceed those of last year, each of the lines handling winter wheat in volume is from 1,500 to 3,000 cars behind last year's movement to date. Fortunately, this apparently pessimistic picture does not represent the true state of traffic, but rather it reflects only the effect on the loadings of the thresher harvesting, the program for government loans on wheat, and the low prices for grain prevailing for the last several weeks, all of which have caused farmers to hold much of their grain back from shipment.

The crop this year is larger than it was last year; in fact it is the largest since 1915, and approaches an all-time record, with the result that more cars will be required to move this season's crop than last, but the holding back of more of the crop than last year will spread the movement over several months instead of concentrating it into a few weeks. Thus, the railroads are being spared the usual expenditures for emergency operations that must be made when the wheat is dumped upon them in excessive volume.

A Bumper Crop

This year, the loadings on all of the lines, despite the bumper crop, remained consistently below last year's figures from the beginning of the season until about July 25, when they began to show a steady increase over last year, which is expected to continue for some time.

This expectation is borne out by the statements of the department of agriculture's corps of crop experts to the effect that this year's winter wheat crop will aggregate 715,425,000 bushels, compared with 685,102,000 bushels last year, and an annual average of 546,396,000 bushels in the last 10 years. A feature of this year's crop has been the excellent production in the "dust bowl" areas of western Texas, Oklahoma and Kansas, where it has been impossible to raise any wheat for some years because of drought. Another feature contributing to the crop was the experimental raising of wheat under irrigation in certain arid sections, which proved highly satisfactory so far as production is concerned.

Although the loadings have been retarded this year,

new high wheat handling records have been established at several points. Wheat receipts at Kansas City, Mo., during the week ending July 8 totalled 9,714 cars, as compared with the previous high week of 9,009 cars established last year. More than 3,600 cars were received over the Fourth of July week-end, establishing another high record, and 8,803 cars were unloaded during the week ending July 15, still another record. The week ending July 8 also produced heavy movements at the inland terminals, 2,519 cars of winter wheat, a new record, having been received at Fort Worth, Tex.; 2,581 cars at Hutchinson, Kan.; 2,070 cars at Wichita, Kan.; 1,500 cars at Salina, Kan.; and 1,643 cars at Enid, Okla. At Enid, four new records were established—2,987 cars received during the week ended June 24; 552 cars received on June 22; and 386 cars unloaded on June 24. The unloading of 1,817 cars at Fort Worth during the week of July 15 was also a new record.

Such heavy movements require an adequate car supply and this can only be attained through advance preparation. This year, more than 40,000 cars suitable for grain loading were stored at loading points throughout the winter wheat area. Unlike last year, few foreign cars were included. Because of the light traffic prevailing during the winter, the eight principal southwestern wheat loading roads had on home lines on May 15 a total of 90,932 system box cars out of a total ownership of 114,466, or 79.6 per cent. The western roads as a whole had 72.9 per cent of their box cars on line on May 1, as compared with 54.7 per cent on the same date last year.

Ordinarily, the Car Service division requires eastern and southern roads to reduce the number of western box cars on their lines progressively week by week, but this was not necessary this year for from May 1 to July 1, the number of western box cars on eastern and southern roads decreased 27 per cent. On July 1, 77.7 per cent of the western box cars away from home were on neighboring lines in home territory, as compared with 67.9 per cent on May 1.

The operations incident to handling a peak wheat movement normally require a considerable transference of train, engine and yard crews, as well as motive power, from other divisions to the wheat loading divisions. A large amount of such transferring of men and engines was necessary last year. This year, however, such emergency measures were not necessary.

Rock Island's Oklahoma Division

A typical division where relatively even, although heavy, loadings occurred is the Oklahoma division of the Chicago, Rock Island & Pacific; while, by way of contrast, an even more furious peak in loadings was experienced on the Plains division of the Atchison, Topeka & Santa Fe than ever before. These two divisions presented such widely differing operating problems that they will be referred to here at some length.

The Oklahoma division of the Rock Island, with headquarters at El Reno, Okla., comprises the north and south main line between Herington, Kan., and El Reno, 231 miles; and the east-west main line between Booneville, Ark., and Amarillo, Tex., 512 miles, as well as several branches. The division is almost entirely single track. Wheat is loaded at practically all points from El Reno north to Herington, a large inland grain terminal being situated at Enid, Okla., on this line. Other wheat loadings take place between Oklahoma City, Okla., and Elk City on the east-west line, and at the latter point a considerable number of cars are delivered to the Rock Island for Enid from a branch of the Missouri-Kansas-Texas which traverses a productive wheat territory. Further wheat loadings take place from the Texas-Oklahoma line to Amarillo, as well as on all the Oklahoma branches.

Operations on the east-west main line of this division were materially improved by the bridge strengthening program between El Reno and Amarillo, which was completed last March. This permitted the operation of locomotives with 246,500 lb. weight on drivers instead of 182,300 lb., which was the limit last year, and eliminated much double-heading that was necessary during the 1937 wheat season.

Last year, the wheat in this area was dumped on the railroad within a few weeks period. In 1937, more than 80 per cent of the crop was harvested with combines, as compared with less than 50 per cent in 1938. In addition, even where combines were used this year, they could not work from dawn to dusk, because the moisture in the grain prevented harvesting in the early morning or late evening hours.

As a result, it was not necessary for the railway to transfer men from other divisions, despite the fact that it was the Rock Island's year to handle the switching at Enid, where the operation is rotated with the Santa Fe and the Frisco on an annual basis. The entire extra board was called into service, as well as 40 men from the Sayre, Okla., Oklahoma City, Haleyville and Shawnee terminals on the Oklahoma division that are not in the wheat loading area. A factor of considerable assistance with the further fact that, at Enid, the principal grain terminal on the division, the elevator operators were far better prepared to unload cars than they were last year, at which time they were confronted with the first bumper crop that moved to Enid in large volume.

The results of the changed operations were evident in June, 1938, when the division produced 225,912,000 gross ton-miles with 136,271 train-miles, as compared with 275,504,000 gross ton-miles from 175,607 train-miles in June, 1937. In 1937, the tons per train averaged only 1,568, as compared with 1,657 tons this year, reflecting clearly the more efficient operations brought about by the absence of violent peak loadings and emergency conditions. Similarly, a gross ton-mileage of 222,490,000 was handled in July of this year with 137,291 train-miles, as compared with 271,812,000 gross ton-miles and 172,201 train-miles last year, while the train load was increased from 1,578 tons in July, 1937, to 1,620 tons in July, 1938. Furthermore, the Kansas City-Oklahoma Rocket, a new fast, streamlined passenger train, traversed the heart of the wheat loading territory between Oklahoma City and Herington in each direction daily this year, and maintained a perfect on-time record during June and July.

The Santa Fe Plains Division

The operating conditions on the Plains division of the Santa Fe, while entirely different, were met with equal ingenuity and efficiency. This division includes the main transcontinental freight line from Clovis, N. M., across the Texas and Oklahoma panhandles to Waynoka, Okla., 352 miles, as well as several branch lines in the same territory. This division traverses some of the hardest hit portions of the dust bowl territory, which areas had ample rain this season for the first time in several years, although not enough to interfere with the combine harvesting of the grain.

Unlike most other divisions of the Santa Fe and other railroads, the Plains division showed an increase of 2,550 cars of wheat up to July 31 of this year as compared

with last year. The wheat loaded on the Plains division to July 31 totaled 8,232 cars, or about 12,348,000 bushels, of which 7,264 cars were loaded in one month, between June 16 and July 16.

This heavy movement coincided with a large transcontinental perishable movement and to keep trains moving over the division without delay, a number of men had to be recruited from adjoining divisions. To secure as much efficiency from these men as possible, they were assigned to crews along with men who knew the territory. The superintendent and trainmasters worked long hours to provide the necessary supervision and were assisted by transportation inspectors from the general offices. Every available locomotive on the division was put into service, preparations having been made months in advance to see that every possible engine was in good repair and ready. In addition, 18 locomotives were borrowed from other divisions.

During the peak, 126 cars of wheat were loaded in one day at Perryton, Tex., a small station. Between Shattuck and McKibben, 93 miles, on the Shattuck-Etter branch, 3,219 cars of wheat were loaded between June 15 and July 31. Two assignments of switcher-hauling service were provided between Shattuck and Spearman, one tying up at Shattuck and the other at Spearman; one assignment was provided between Spearman and Perryton and another between Shattuck and Huntoon. Later, when the elevators at Enid, Okla., and Alva were filled, another switcher-hauling run was added between Spearman and Etter, to handle the grain moving west to Amarillo.

Fewer Claims

On all of the roads, the movement this year has been made with considerably fewer claims for seepage and loss of grain because of the improper cooperage of cars. With the supply of home cars sufficient to take care of the peak movement, arrangements were made in advance for the cars to be in proper shape for grain loading before they were stored on sidings prior to the opening of the season. Another important factor in preventing claims has been the provision of a sufficient number of properly constructed grain doors. The importance of this item is indicated by the fact that, on the Plains division of the Santa Fe alone, 115,000 grain doors were installed in cars in six weeks.

The proper cooperage of cars for wheat loading includes the twisting or folding of an 18-in. strip of heavy paper in 20-ft. lengths and attaching it along the door frames and threshold plates of the cars in one continuous strip to form a cushion for the grain doors into which they fit snugly, preventing seepage of grain.

The number of grain doors required varies with the type of car and the amount of grain loaded. Standard grain doors are 7 ft. long by 20 in. wide, and so-called "half doors" are 7 ft. long by 10 in. wide. For 80,000-lb. capacity box cars, three 20-in. doors are placed against the door posts, covering each door to a height of 60 in.; one 20-in. door is used to lap the bottom joint, and one 10-in. door to lap the top joint, or a total for the car of eight standard and two half doors. In 100,000-lb. capacity cars, 10 standard and 4 half doors are used.

Spring Wheat

The production of spring wheat this year is estimated at 251,987,000 bushels, as compared with 188,891,000 bushels last year and an annual average for the last 10 years of 206,495,000 bushels. As with winter wheat, areas that have experienced crop failures in recent years have produced abundantly this year. The combined wheat crop in the United States is estimated at 967,412,000 bushels, compared with 873,993,000 bushels last year and an annual average of 752,891,000 bushels in the last 10 years. A huge Canadian crop is also expected, and the railroads in the U. S. A. have been returning Canadian cars to those roads, with the result that in July, the percentage of system cars on line to total ownership was 91.9 for the Canadian National and 93.9 for the Canadian Pacific.

Co-Operation

Even in seasons when large peak loadings do not prevail, the railways cannot handle bumper crops without close co-operation with each other. Cars of one railroad going to elevators on another line are, with few exceptions, given the same speedy return movement that home cars receive. Then, as the winter wheat carriers pass their peak, they co-operate with the spring wheat carriers, whose loadings are beginning. There are many instances of joint operations of different kinds in inland terminals, all tending toward greater co-operation and greater efficiency in operations. In recent years, the shippers' regional advisory boards have also supplied valuable co-operation and the various state grain inspectors are deserving of the utmost credit for the manner in which they have not hesitated to go beyond the requirements of their jobs, when necessary, to inspect cars at outlying points, in order not to delay unloading.

At each of the principal terminal markets, under the supervision of a shippers' regional advisory board, a terminal grain committee has been appointed, consisting of a chairman and three to five members, representing the grain trade; a representative of the state grain inspection department, and railroad representatives. The car service division has representatives in the field and since, in view of the co-operation between the railroads, they have little "policing" of cars to do, they devote their energies instead to serving as contact men between the shippers and the railroads. They also prepare daily reports covering all railroads, showing receipts, unloadings, loadings, cars ordered, cars on hand awaiting orders, and cars at the elevators and mills. The latter is in detail as to each individual mill or elevator. The complete report is sub-divided by railroads and totalled for the market as a whole. Whenever any local consignee is shown by this report to be getting behind in his release of cars, as compared with the volume on hand consigned to him, the matter is referred to the grain committee to bring such pressure to bear as will produce a more active unloading or reconsignment.

This year, car service agents were assigned to Wichita, Kan., Hutchinson and Salina; Enid, Okla., and Fort Worth, Tex., with a part-time man at Amarillo, Tex., and additional men at Kansas City who also spent some time at St. Joseph, Mo., and Atchison, Kan. Beginning about August 10, additions were made to the regular force at Omaha and extra men were stationed at Minneapolis, Minn., and Duluth, and at Grand Forks, N. D., to take care of the spring wheat movement.

By these means, aided by the more orderly loadings, a large portion of the heaviest wheat crop since 1915 has been taken to market with a complete absence of car shortages. By re-adjusting their methods to meet the changed conditions, the railways were not only able to satisfy the needs of the shippers and receivers, and to reduce claims, but also to handle the huge crop with the utmost efficiency from the standpoint of rail operations.

Power Adzers for Producing New Level Tie Plate Seats Have Speeded Rail Laying and Prolonged Rail Life

Work Equipment — An Aid to Economies in M. of W. Work*

This paper points out the broad scope for machines in track and bridge and building operations and the efficiency and economy to be derived therefrom

By C. R. Knowles

Superintendent Water Service, Illinois Central, Chicago

THERE was a time not so long ago when railway maintenance departments were criticized for what was termed their backwardness in adopting machine methods in maintenance of way work, but this criticism cannot be made with the same force today in view of the developments of recent years when mechanical methods have received wide acceptance. The extent of this acceptance of maintenance of way and structures work equipment is apparent from the fact that the investment in such equipment by the Class I railways is now in excess of $100,000,000. In 1937 alone, the roads purchased more than 3,300 units of new equipment involving a total outlay of more than $5,000,000.

Prior to about 25 years ago maintenance work equipment on the railways consisted almost entirely of special purpose units such as ditchers, spreaders, pile drivers and snow plows. Motor cars and tie tampers were the fore-runners of the many lighter units of equipment to come. The first motor car was introduced about 40 years ago, and it was not until 1910 that the first road-master's district was fully equipped with such cars. Today, however, the motor car is a standard unit of equipment for maintenance gangs on most railways, and more than 50,000 of these cars are now in service.

The first mechanical tie tamper was used on an American railroad in about 1913. This was the forerunner of the present-day tie tampers which have almost completely supplanted hand tamping. Prior to 1913, the only practical machine of this character was invented and patented by Albert Collet in Paris, France. The first tampers were operated by compressed air. They were followed by the electric tamper of the vibrator type in 1918, and ten years later the magnetic type of tamper was introduced. The motor-driven, hammer-blow electric tamper was produced in 1930.

Peak Development 1921-1930

The ten years ending with 1930 may be termed an era of development in railroad work equipment. While certain types of work equipment were used prior to that time, and while important developments have occurred since, it was during this period that the greatest progress was made in the application of power units to maintenance of way work. However, even with the large number of machines now available for doing railway maintenance work, work equipment is still more or less in its infancy. Not only will there be improvements in existing machines that will simplify their operation and increase their efficiency, but other machines will be developed to do much of the work which is still being performed by hand. For example, there is a field for the further development of mechanical methods of making tie renewals, which will do this work successfully with a saving in time, money and physical effort. A machine of this type is now in the experimental stage.

While there may be a few employees who protest the widespread adoption of work equipment, the vast majority of maintenance of way men would be unwilling to return to the former hand methods. Work equipment has made track work much more attractive to labor, and there

* Abstract of a paper presented before the New England Railroad Club.

Power Spike Drivers Are Only One of the Many Types of Air-Operated Tools Used in Maintenance of Way Work

is no question but that the relatively good physical condition of track today, in spite of the depression, is due in no small part to the intelligent use which has been made of such equipment.

It must be admitted that in some cases, due to improper application and operation, the efficiency which has been obtained from work equipment is questionable, and the benefits derived from its use exceedingly small. Quite naturally, situations have arisen where the adoption and use of work equipment have not kept pace with the development and purchases of such equipment. This has been due frequently to conditions over which maintenance officers and men have had no control, although in many cases these situations may have been brought about by a lack of understanding or disregard for the conditions which make for efficient operation of work equipment.

The building up of rail ends by welding is a comparatively new development, requiring not alone special equipment for the welding, but also grinders for smoothing off the surface of the welds. There is also the cross grinder for slotting the ends of the rail at joints to prevent end flow, and the side flow grinder for removing the side flow of metal on switches, stock rails, etc.

The welding of rail ends, frogs and switches by the oxy-acetylene process has been followed for about 25 years. The use of electric-arc welding for these classes of work is a more recent development, its use having been restricted to a large extent until recent years because of lack of ready portability of the equipment required. This type of welding was for a long time confined largely to the building up of manganese steel frogs and crossings, but in recent years its use has become more universal, 29 electric arc welding outfits having been purchased in 1937.

A more recent development in rail welding, which is still in the experimental stage, is the continuous welding of rails. Advocates of this process claim that it will double the present life of rails.

On-Track Equipment

Work equipment as used in maintenance of way operations may be divided into two general classifications—on-track equipment and off-track equipment. Each of these classifications may be sub-divided under three general heads.

On-track equipment

(1) Large on-track equipment, including pile drivers, ballast cleaners, derricks, cranes, spreaders, snow plows and lidgerwoods.

(2) Self-propelled on-track work equipment, including rail cranes, motor cars, weed burners, ballast discers, mowing machines, power ballasters and oil sprayers.

(3) Light on-track equipment, non-self-propelled, including tie adzers, spike drivers, spike pullers, bolt tighteners, rail grinders, welding machines and air compressors.

Air compressors are sometimes self-propelled, particularly when used with spike drivers, boring machines and nut-tighteners in forward progressing operations.

The modern pile driver is generally a high-speed, self-propelled unit adapted for use in both the construction and maintenance of bridges. Cranes, derricks and clam shells are also in general use and have a wide range of adaptability.

Rail Laying

Rail laying offers the most striking example of the effective use of work equipment, as large modern rail laying gangs are fully equipped with mechanical equipment, replacing the former hand methods. Mechanical equipment has completely revolutionized rail laying methods, together with gang organizations. When rail was laid by hand, rail gangs were generally organized from the division forces and consisted of 25 to 75 men. The introduction of the rail crane increased the speed of laying rail materially. This necessitated an increased gang organization to keep up with the cranes, which, naturally, sometimes resulted in considerable lost motion. The development and use of the tie adzer, the spike puller, bolt tightening machines and the spike driver permitted a more balanced organization, as with this equipment each task is performed by a self-contained unit which progresses at the same rate as the other units in the organization.

In addition to the equipment already listed as commonly used for rail laying, other special machines are also available, as, for example, rail drills, rail bonding drills, wood boring machines for drilling holes for screw spikes, screw spike drivers and rivet busters for splitting frozen track nuts when dismantling old rail. The air compressor is also, of course, a most important item of work equipment in rail laying work, as well as for track surfacing.

Many machines and methods have been used by the railroads for destroying weeds on the roadbed and right-of-way. Among these are super-heated steam from locomotives, revolving wire brushes, track and off-track mowing machines, discers, scarifiers, weed burners, and the

application of chemicals. The use of super-heated steam has produced good results within the limitations of this method. Mowing machines are used extensively with very satisfactory results. Horse-drawn and tractor-drawn mowers are also used around stations and other parts of the right-of-way.

Weed burners consist of two general types, namely, the oven type, in which the flame is enclosed, and the extension type, where the flame is forced by air through extended pipes. Experience with the use of chemicals in killing weeds over a period of 20 years indicates that this method is very effective under certain conditions and has a sterilizing effect on the ballast when used consistently. The cleaning of ballast to insure proper drainage is, of course, of first importance in maintaining good track, and many cleaning machines and devices have been devised for this purpose.

Bridge and Building Gangs

In discussing maintenance of way work equipment it is usually assumed that such equipment applies principally to the track forces. The use of such equipment in bridge and building work, however, is of equal importance, and a wide range of equipment is now available for this class of work. Such equipment includes cranes, derricks, pile drivers, highway trucks, air compressors, bolt tighteners, paving breakers, jack hammers, drills of various kinds, chipping hammers, scaling tools, wire brushes, sand blasting equipment, riveting hammers and paint spraying outfits. Wood-working machines are available for work carried out in shops; portable, power-driven table saws and power hand saws of various types are available for use in the field. Portable electric generators; power-driven pumps, of both the diaphragm and centrifugal type, cement guns; sidewalk and roadway sanding machines; highway trailers for handling long timbers; oxy-acetylene cutting outfits and many other similar tools are now available and are being used by bridge and building forces. The railroads purchased 64 air compressors and 17 electric generators in 1937, together with a large number of wood-working and cleaning tools.

Off-Track Equipment

Off-track equipment may be (1) equipment mounted on skids with self-contained power plants; (2) rubber-tired vehicles used chiefly as a means of transportation for men and materials; and (3) crawler-mounted equipment used both as a transportation agency and as a source of power.

The types of equipment included in the first two classes are obvious. Included in the third group are tractors of the wheel type, and, more generally, the crawler type. Units of the crawler type are regularly equipped with power take-offs for the operation of auxiliary equipment. Some of this equipment is operated by means of a flexible shaft, while equipment mounted directly on the tractor is generally operated by means of a belt or chain drive.

Wheel-Type Equipment

A marked trend toward off-track equipment has been manifested in recent years in the more general use of motor trucks and automobiles in place of work trains and other types of equipment operating on the rails, although much of the off-track equipment is limited to certain phases of maintenance of way work. Automobiles and trucks are particularly advantageous for the transportation of men and materials at terminals, where the operation of track-mounted equipment is expensive because of frequent and extensive delays due to traffic. The use of automobiles and trucks is also advantageous where work must be done at some distance from the tracks.

Off-Track Equipment, Including the Crawler-Type Tractor, Is Rapidly Finding an Important Place in Roadway Maintenance Operations

Moreover, where good highways are available, much more mileage can usually be covered over them in a given time than over the tracks.

Unfortunately, wheel-type equipment is not adapted to operation over the average railroad right-of-way and is at a disadvantage in territory where highways are not located in close proximity to the track. One writer has suggested the possibilities of building a roadway within the right-of-way to be used for the operation of maintenance equipment and for the transportation and distribution of material.

Automobile Trucks

In addition to being used for the transportation of men and materials, automobile trucks are also used for mounting work equipment, such as air compressors, concrete mixers, pumps, and well-drilling and welding equipment. For example, one road has used successfully about its Chicago terminal an electric-arc welder mounted on an automobile truck. The use of this equipment has increased the available working time of the welding outfit approximately 40 per cent. This is accounted for by the saving in the time required to move the machine from one job to another. In spite of the fact that there are as many as 12 parallel main tracks in parts of this terminal, no difficulty has been experienced in obtaining access to the work by the truck-mounted welding unit with no more than 300 ft. of cable.

The cost of operation of this truck-mounted welder in frog and crossing work, including the wages of the welder and the grinder operator, and the cost of oil and gasoline for both the welding machine and the gasoline-driven grinder, averages about $11 per 8-hr. day.

While truck-mounted air compressors have not been used extensively by railroads, there is no reason why the use of such equipment at large terminals could not effect material economies. Wheel-type tractors are adapted to many uses as off-track equipment, and are now employed extensively by the railroads in maintenance of way work, as well as by the stores and mechanical departments. As with the automobile and motor truck, this type of equipment is best adapted to use where roadways are

available, although the wide tread and large diameter of its rear wheels permit it to be operated under conditions wholly unsuited to motor trucks equipped with standard tires.

A small wheel-type tractor hauling a 1½-cu. yd. dump wagon is employed regularly to haul rubbish away from a large freight terminal in Chicago. This tractor makes from 12 to 15 trips per day, with a haul of about 1½ mi. The total cost of operating this tractor over a period of a year has averaged slightly more than 27 cents a yard.

Crawler Tractors

The crawler tractor is best adapted for general service where roadways are not available. The bearing pressure of the treads of the sizes commonly used in railroad work is only about five or six pounds per square inch, although the weight of the machines may range from 5,000 to 10,000 lb. The low-bearing pressure of the treads permits these tractors to be operated over snow, through shallow water and on swampy ground. They can travel along any standard-gage railroad track and can cross open-deck trestles or through plate-girder bridges. Furthermore, they can climb a slope of 1½ to 1 with ease, and their low center of gravity provides a large factor of safety against overturning.

Crawler-type units are used largely on the railroads for handling earth in a wide range of excavation, ditching and grading work, although a considerable number of them are also equipped with various power-driven attachments for carrying out other items of maintenance of way work. Thus, the tractor is a mobile power plant, flexible in operation, adapted to a wide range of uses in all seasons of the year.

An example of the utility of tractors in snow removal is afforded by the practice of one large railroad terminal which employs three tractors. One of these is equipped with a bulldozer for piling snow; the second with a front-end loader for loading snow; while the third is used for hauling away the loaded snow. These machines were first employed in this work during the winter of 1932-1933, and proved so effective that they are now used regularly for this purpose. During the summer months, the tractors are used in various kinds of maintenance of way work out on the line, and in the late fall they are

The Use of Portable, Power-Operated Tools Is Speeding Up Many Classes of Bridge and Building Work

moved to the terminal and are held in readiness for the handling of snow.

Standard crawler tractors for mounting welding generators for rail-end, frog, switch and bridge work are also proving highly satisfactory. Most of these tractors are of 25 hp. capacity and carrying 300-amp. generators.

Among the other developments that have been made in off-track equipment in recent years is a special type of crawler carrying an air compressor. This unit, which is propelled by air motors, differs from the conventional

Cranes Are Indispensable to Many Roadway and Bridge Maintenance Operations

type of tractor in that it has been made much narrower to permit it to be operated between tracks or through narrow cuts. Compressors, with rated capacities ranging from 140 to 320 cu. ft. per min., are also available on standard tractors. If greater capacities are desired, two compressor units can be mounted on one of the larger size tractors. The use of equipment of this kind eliminates the necessity for long pipe lines and crib set-offs. Another advantage is that it can be loaded under its own power on push cars or flat cars, eliminating cranes or other heavy equipment for this purpose.

Crawler-Mounted Cranes

Crawler-mounted cranes are adapted to almost every class of ditching or material-handling work. They are also effective in handling ballast, refuse, cinders, coal and snow, and may be used for the loading and unloading of rail, the handling of frogs, and, when equipped with magnets, for the handling of special track materials and scrap. They may be operated from the ground or on flat or low-side gondola cars with drop ends, and are moved to and from the cars under their own power.

Crawler-mounted equipment has practically revolutionized ditching, bank widening and many other forms of grading, and where such machines have been available, they have practically supplanted the work train and large gangs used formerly, with large economies. One railroad has 20 of these machines, another 17, and a third 16. Evidence of their utility on the three roads in question is seen in the fact that they are being used on these roads from 179 to 200 days a year. Forty-two draglines and power shovels and 20 tractors, most of which were equipped with bulldozers and front-end loaders for use in ditching and grading, were purchased by railroads in 1937.

Advantages of Work Equipment

Crawler-mounted equipment, particularly the tractor unit, has many advantages for effecting maintenance of way and construction work. Its more important advantages are as follows:

(1) Offers minimum interference to rail traffic

(2) Utilizes the maximum effective working time

(3) Is adaptable for use at points not served by tracks
(4) Can be loaded on cars under its own power and moved along the right-of-way entirely independent of the track
(5) Is adaptable for use with small gangs
(6) Is suitable for use during all seasons of the year
(7) Increases the safety of train operations, and
(8) Eliminates the necessity for utilizing train service employees, as is frequently the case with track-bound equipment.

In conclusion, the advantages in the use of work equipment to both the railroad and railroad employees may be summed up briefly as follows:

(1) Maintenance of way work equipment, used properly, has proved its economy and efficiency in maintenance of way work
(2) The employee is benefited since such equipment removes much of the drudgery from many ordinary maintenance of way tasks, and, in addition, frequently results in increased compensation to the employee
(3) Much of the equipment used, when properly handled, removes the hazards common to manual work and contributes to the reduction in injuries among employees.

Maintenance of way work equipment has proved its worth and is here to stay. All who are directly responsible for its operation and maintenance, as well as their supervisory officers, should be fully acquainted with the amount of money invested in such equipment. They should also be impressed with the importance of using the equipment as efficiently and effectively as possible, not only to insure the greatest output and the best results, but also to insure the largest return upon the money invested in it.

I. C. C. K. O.'s C. G. W. Common

WASHINGTON, D. C.

FOLLOWING closely a proposed plan of reorganization for the Chicago Great Western recommended by Finance Examiner Homer H. Kirby, Division 4 of the Interstate Commerce Commission, on August 16 approved a new capital structure for the road which would entirely eliminate the equity of the common stockholders.

Examiner Kirby's plan was digested in the *Railway Age* for January 29, pages 247 and 248. Commissioner Mahaffie, dissenting in part wrote a short opinion in which he objected to the amount of fixed interest charges in the majority's plan.

Division 4, in placing its stamp of approval on this plan for the Great Western, is following the philosophy of the Spokane International case in eliminating the interest of the common stockholders. Recently, two other finance examiners have followed the same line of reasoning by recommending the elimination of the common stock holdings in proposed plans for the Chicago, Indianapolis & Louisville and the Denver & Rio Grande Western. In this respect the commission is following the reasoning in the Boyd case in which the U. S. Supreme Court held that in railroad reorganization cases the bondholders should have priority in the distribution of new securities even if it should mean that the common and preferred holders would be completely eliminated from the new company. Also, the instant case gives added strength to the view that the commission is determined to make all the reorganized roads as nearly "depression-proof" as it is humanly possible to do so.

New Capitalization Is $62,291,827

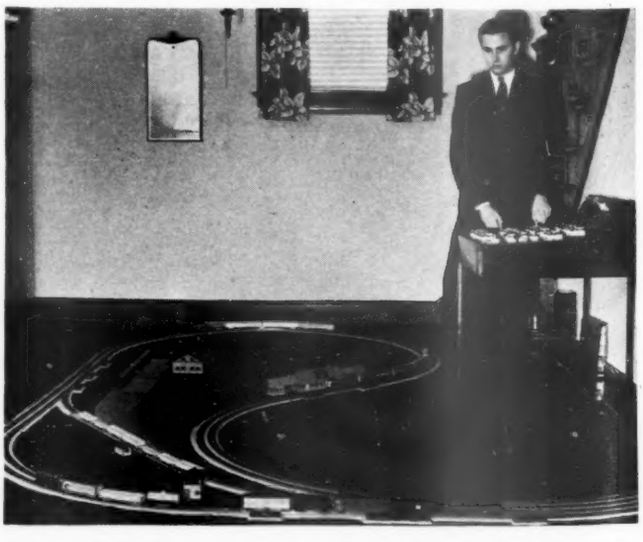
Under the commission's plan, the new company would have a maximum capitalization of $62,291,827. The commission finds that there will be adequate coverage of fixed charges of an amount not exceeding $850,000. The total charges before dividends, consisting of sinking fund, fixed, capital fund, and contingent interest charges should, in the commission's opinion, not materially exceed $1,700,000 per year. The annual requirements of the reorganized company are as follows: Fixed-interest charges $767,071; rent for leased road, $75,000; sinking fund charges, $93,171; capital fund charges, approximately $500,000; making a total of $1,435,242. On this basis, the commission believes that with normal average earnings of about $1,700,000, there would remain approximately $265,000 of income available for payment of contingent interest.

Treatment of First Mortgage Bonds

The holders of the first mortgage bonds would receive in exchange therefor and in payment of unpaid interest accrued, $10,159,660 of new first mortgage four per cent bonds on the basis of 25 per cent of the principal amount of their holdings and accrued and unpaid interest thereon to December 31, 1937; $6,095,796, of new income mortgage 100-year 4½ per cent bonds to be allocated in exchange for 15 per cent of the principal amount of their bonds and accrued and unpaid interest thereon to December 31, 1937. The remaining 60 per cent of bond principal and interest must, according to the commission, be allowed in new capital stock, at the rate of 45 per cent of the total claim in new preferred stock and the remaining 15 per cent in new common stock. This allocation will require $18,287,388 of preferred stock and $6,095,796 of common stock.

Holders of $46,073,500 of present preferred stock out-

* * *



This HO-Gage Model Railroad, Built by Malcolm Harvey, of Joliet, Ill., Son of a Rock Island Brakeman, Will Be a Part of the Rock Island Exhibit at the Iowa Centennial State Fair

standing would receive $11,518,375, par amount, of new common stock on the basis of 25 per cent of par.

The commission is of the opinion that under favorable conditions the new company may reasonably expect to have maximum earnings available for fixed charges of approximately $2,700,000 annually.

Breakdown of Capitalization

The immediate capitalization of the reorganized company, after consummation of the plan, would be substantially as follows: Equipment obligations, $4,208,122; Wisconsin Central, first mortgage 3½ per cent assumed bonds, maturing January 1, 1950, $500,000; first mortgage four per cent bonds, maturing January 1, 1988, $15,586,350; general income mortgage 4½ per cent bonds, maturing January 1, 2038, $6,095,796; 365,747.76 shares, par value $50 a share, of five per cent preferred stock, $18,287,388; 352,283.42 shares, par value $50 a share, of common stock, $17,614,171; making a total capitalization of $62,291,827.

The new company would buy the property covered by the option of the old company's lease of the St. Paul Bridge & Terminal for $1,500,000 in cash or in new first mortgage four per cent bonds, at the option of the terminal company. The Reconstruction Finance Corporation and the Railroad Credit Corporation will receive in exchange for their notes and unpaid interest new first mortgage bonds in the full principal amount.

There will be no allocation of new securities to the outstanding bondholders of the Mason City & Fort Dodge. The new company will deposit with the trustee under the Mason City & Fort Dodge mortgage a surety bond guaranteeing the fulfillment of the obligations, the bonds of the road will be cancelled, the mortgage released and all property of that road conveyed to the reorganized company or the property sold at a foreclosure sale under the mortgage.

The plan of the commission is promulgated to be effective as of January 1, 1938.

Mahaffie Objects to Fixed Charges

Commissioner Mahaffie, dissenting in part, points out that the real trouble with this road lay in its fixed charges. "The majority," he said, "approve a plan that cuts obligatory interest severely and to a basis that in the past would, on the average, have been adequately covered. But the plan now approved is for the future. We must find that the probable prospective earnings of the property, in the light of its earnings experience and all other relevant facts, will provide adequate coverage for its fixed charges."

The commissioner then goes on to show that among the relevant facts that must be considered in a reorganization are the extent to which railroad traffic in relation to general business in the country has been decreasing and is likely to decrease in the future, and the reduced spread between revenues and expenses in railroad operations. Another factor, he observes, is the necessity and usefulness of the particular property in the general network of railroads, and its chance to hold or to increase its proportion of rail traffic at profitable rates. "These things," he declared, "seem to me of greater importance than is the level of earnings accrued in past years under conditions quite different from those likely to be encountered hereafter."

Continuing his dissent, Mr. Mahaffie pointed out that "Creditors of a railroad in reorganization can expect to recover their investments only out of earnings. Reorganizations are necessarily expensive. A new structure should protect creditor claims to earnings as far as is practicable. To accomplish this the imposition of fixed charges is not essential. It should be calculated also to prevent the necessity of future reorganization."

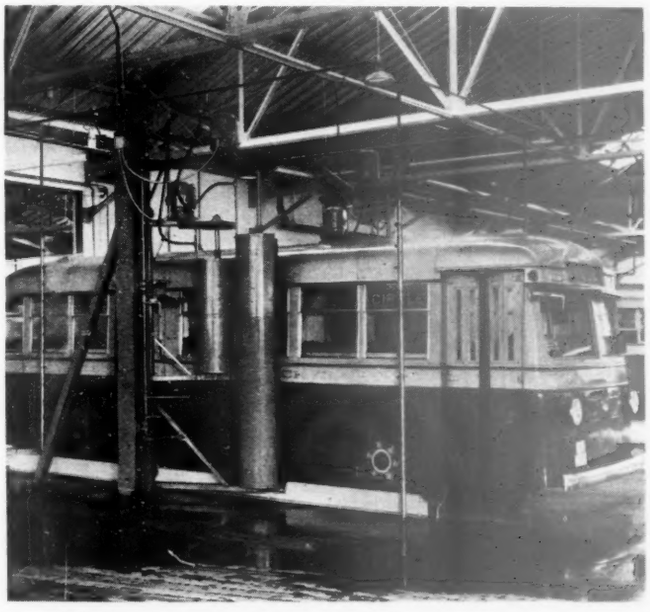
Cites Road's Six-Month Deficit

Mr. Mahaffie also called attention to the fact that for the first six months of the current year the Great Western had a deficit in net railway operating income of $446,856. "Of course," he said, "it is hardly to be anticipated that such an experience as that of the first half of 1938 will recur often or continue long. Nevertheless, it furnishes an indication of what may happen."

Instead of authorizing 25 per cent in new first mortgage 4s, and 15 per cent in incomes for the present bondholders, he would provide for 40 per cent in income bonds. He would also limit fixed interest obligations to the equipment obligations to be assumed and the amount, apparently not in excess of $2,000,000, otherwise necessary to carry out the reorganization with provision for future issues under the first mortgage for such capital purposes as hereafter may be found necessary.

Washing Buses and Cars

THE Blackhall bus and car washer, manufactured by the Ross & White Company, supplies a means for eliminating the hand scrubbing of equipment with pails and brushes. As the buses enter the washer, they pass the beam of an electric eye manufactured by the General Electric Company, and, when the light beam is broken, the motors automatically start the cutting and cleansing sprays of the washer. The unit is equipped with an electric telechrome timer, set for the time necessary to wash a bus or car, which is 40 seconds in the case of a bus. After the bus passes through the washer, the motors, brushes and sprays stop automatically, thus preventing a loss of water. The accompanying illustration shows the washer in operation.



The Blackhall Washer Gives a Thorough and Automatic Cleaning

B. & O. Class M-53 Wagon-Top Box Car

Additional Wagon-Top Box Cars Built by the B. & O.

Order of 2,000 cars recently built are roomier, stronger, cheaper and require fewer repair parts than the conventional type

IN 1935, the B. & O. built 13 experimental cars of various types, using lightweight high-tensile alloys in their construction.* Five of these cars were of the covered-wagon-top type. Having demonstrated, through service tests, the practicability of this design, it was used in 1936 and 1937 when 1,300 wooden-body box cars were scheduled for rebuilding. These were cars with wooden bodies on steel underframes of the fishbelly type, the underframes and trucks being still in serviceable condition, but on which the top had to be entirely replaced. Instead of replacing with wooden bodies, new all-steel bodies of the improved wagon-top design were installed, thereby increasing the cubic capacity of these cars by 32.7 per cent over the original design with the wooden body. In June, 1937, the Baltimore & Ohio started construction of 2,000 entirely new cars of the wagon-top design, to be known as class M-53, all of which were completed by March, 1938.

These cars were built at the company's shops, using the progressive spot system. The building of the 2,000 cars was allocated as follows: 675 were constructed at Keyser, W. Va.; 575 at DuBois, Pa.; 385 at Chillicothe, O.; and 365 at Washington, Ind. The design and construction of this car is such that it is possible for a unit of 50 men to erect and complete, ready for service, two and one-half cars per working day of 8 hours.

The underframes and trucks were built by the Bethlehem Steel Company and shipped complete to the various shops. The underframe is the Duryea cushion type, made of copper-bearing steel, in which the center sills are subjected to end loads or buffing shocks only, and are not a part of the car structure; they do not carry any weight of the body or superimposed load. The B. & O. has found this type of underframe very satisfactory in service and now has 14,000 cars in service equipped with them.

The trucks are made of grade B steel, with 5½-in. by 10-in. journals and integral-box side frames. The truck bolsters are equipped with roller side bearings. No. 15 Buffalo and Damascus brake beams, and Schaefer truck connections are used. The trucks are also equipped with one-wear wrought-steel wheels and grooved journal bearings to trap waste grabs. Orders for the integral-box side frames and bolsters were distributed among the Buckeye Steel Castings Company, American Steel Foundries, Ohio Steel Foundry Company, Gould Coupler Company and the Pittsburgh Steel Foundry Corporation.

The body superstructure is the most interesting feature of this type of car, because of its radical departure

Class M-53 Wagon-Top Box Cars Under Construction in the B. & O. Shops at DuBois, Pa.

* These cars were described in the *Railway Age*, April 27, 1935, pages 646-648.

from previous car designs. The superstructure is formed of combination side post and roof carline in one piece, extending up one side of the car, across the top, and down the opposite side. They are formed with a large radius at the eaves and drain slope from the center of the roof. Riveted to them at the eaves, on the inside of the car, is a longitudinal side plate of the same shape as the side posts. The combination side posts and roof carlines were formed in their familiar U shape at the bolt and forge shop of the B. & O. at Cumberland, Md., on a machine especially designed for the purpose. Shipped to the various shops, ready to install, they were easily lifted into place by a crane and quickly riveted to the side sills of the car.

The side sheets, made of copper-bearing steel, were fabricated at the Cumberland bolt and forge shop and shipped to the various shops ready for installation. These combination side-and-roof sheets, which are $\frac{3}{32}$ in. thick and which extend from the side sills to the center of the top, or ridge, of the car, are joined at that point by a waterproof riveted lap joint. Each sheet is fastened first at the side and then bent over to form the roof, making a continuous sheet from the side sill to the center of the roof. The sheets are riveted to the outside faces of the flanges of the combination side posts and roof carlines, making it impossible for driving rain to hit the edges of the sheets and force its way into the car, the edges being protected by the channels of the frame members.

The ends of the cars were fabricated at Cumberland, each made from a single sheet of $\frac{3}{16}$-in. copper-bearing steel, stiffened by vertical posts. They are flanged and riveted to the end combination side post and carline flange.

The side doors, also fabricated at Cumberland, are made of a single sheet of steel, designed with two horizontal stiffeners on the inside. The bottom hangers are of the roller type mounted in steel castings and rolled on the flange of a 6-in. channel door track. Depressions in the door track assist in holding the door either in its open or closed position, and insure that the weight of the door is off the rollers when it is closed.

The interiors of these cars are lined with wood, except the ceiling. The floor is 1¾ in. thick, and the side planking is $1\frac{3}{16}$ in. thick. Nailing posts are imbedded in the side-post channels and their locations are marked with a black stripe on the face of the inside lining. Shippers are requested, by stenciled instructions in the car, to do their cleating and nailing at the places so designated.

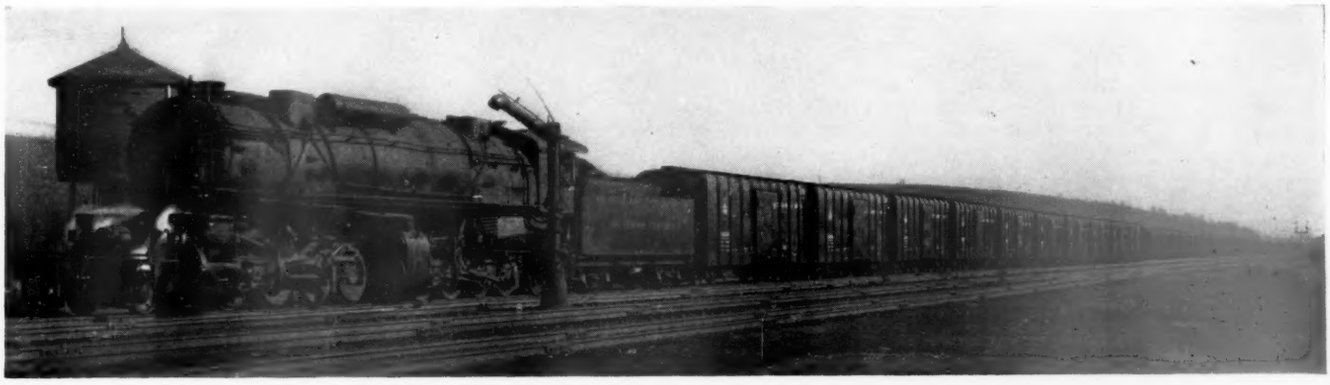
These cars are equipped with the Barber lateral-motion device, Type E automatic couplers which are operated by the Imperial rotary coupler release rigging, type AB automatic air brakes, Ajax hand brakes, and improved side and end ladders which can readily be removed in transportation yards for repairs, without requiring the car to be sent to the shop track.

Comparison of General Dimensions and Weights of B. & O. Class M-26e and Class M-53 Box Cars*

Class	M-26e	M-53
Light weight of car, lb.	48,100	46,500
Load limit (revenue load), lb.	120,900	122,500
Ratio of payload to gross load	0.715	0.725
Capacity, cu. ft.	3,056	3,712
Inside length, ft. and in.	40-6	40- 6
Inside width, ft. and in.	8-9⅛	9- 2
Inside height, ft. and in.	8-7⅜	10- 0
Width at eaves, ft. and in.	....	9-10
Height at eaves, ft. and in.	....	12- 7
Length of car in train, ft. and in.	45-4	45- 0½

* Both of these types have 5½-in. by 10-in. journals and Duryea underframes.

The table shows a comparison between a B. & O. box car of the conventional type, class M-26e, and the new car, class M-53. The points emphasized by the railroad in favor of the new design are lower maintenance cost, fewer parts, fewer joints where water may enter than in any other type of all-steel box car, and relative freedom from rolling insured by the lightness of the superstructure and low center of gravity. It is necessary to carry but few parts at repair shops to take care of the class M-53 cars, the only parts needed for the superstructure being the combination side and roof sheet and the combination side post and roof carline. The B. & O. is using cars of this type exclusively in trains Nos. 117 and 118, fast overnight merchandise freight trains operating between Pittsburgh and New York. Shippers are requesting them for loading their products and their popularity is said to be increasing daily.



Train of Newly Built Wagon-Top Box Cars Leaving DuBois, Pa., En Route to Pittsburgh

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THE FRENCH NATIONAL RAILWAYS have received delivery of a new 4,200-hp. Diesel-electric passenger locomotive for service on the southern line between Paris and Menton. Power plant equipment consists of four 1,050-hp. Diesel engines for propulsion, while two auxiliary motors of 150-hp. each are provided for supplementary services. The locomotive weighs 225 tons and rests on 16 pairs of wheels. Service on the Paris-Menton run requires covering 1,046 kilometers (649 miles) in 10 hours 30 min., and a sustained speed of 130 k.p.h. (81 m.p.h.) over a large part of the run. Furthermore, each trip is to be made without stop for fueling or lubrication.

NEWS

U. S. C. of C. Calls Transport Parley

Announcement cites "urgent need" for legislation at next session

Pointing to the "urgent need" for transportation legislation in the next session of Congress, George H. Davis, president of the Chamber of Commerce of the United States, announced on August 14, that the Chamber is calling a Transportation Conference to be held in Washington, D. C., September 14 and 15. The conference is the outgrowth of requests received by the Chamber from many directions for consideration of the nature of possible legislation, and representatives of all the principal business organizations concerned in the transportation situation will be invited to participate.

"The Chamber's Transportation Committee, which has recommended calling the conference," said Mr. Davis, "includes representatives of railroad, bus, truck, water and air transport, as well as a number of important shippers and other representatives of the general public interested in transportation. The committee, under the chairmanship of Samuel T. Bledsoe, president, Atchison, Topeka & Santa Fe Ry., has been giving close attention to the railroad situation and related problems. The committee welcomes the assurances given by congressional leaders that preliminary work on a transportation legislative program will be actively taken up by Congressional committees, probably in November.

"Meanwhile it is timely for interested parties to formulate suggestions; and, obviously, a common understanding among all concerned as to the essentials of a practical program is desirable. The purpose of the conference will be to appraise the chief outstanding difficulties of the different agencies, particularly the railroads, to promote general understanding and agreement as to remedial measures, and to further coordination of effort.

"Among the subjects which have been suggested for consideration by the conference may be mentioned policies having to do with railroad revenues; policies affecting economies in railroad operations; problems of competition among transportation agencies; and the question of the organization of government agencies dealing with transportation."

As in the case of previous conferences called by the Chamber, such as those on transportation, merchant marine, construction, industrial development, distribution, forestry and agriculture, this conference will be an autonomous body. It will speak in its own name and on the responsibility of those participating. Among these earlier conferences was the Transportation Conference of 1919 which the statement says, "worked out many of the important proposals later embodied in the Transportation Act of 1920 under which the railroads were restored to their owners after the war-time government control."

"A Second Transportation Conference in 1924," it goes on, "covered not only railroad problems, but also those relating to highway and water transportation. Some years later the Chamber, following referendum votes of its membership, advocated changes in the Interstate Commerce Act relating to railroads which were adopted by Congress in 1933, and supported policies of bus and truck regulation which were finally enacted into law in 1935. It also made recommendations for regulation of water transportation which, by successive Acts of Congress, have now been largely put into effect for intercoastal and coastwise shipping. Still more recently, and as part of the movement leading up to the enactment of the Civil Aeronautics Act recently adopted by Congress, the Chamber advocated regulation of air transport lines following the general pattern provided in the Interstate Commerce Act."

"It is hoped," Mr. Davis concluded, "that, in bringing to bear wide business experience in its many fields upon the transportation situation, the conference may be able to propose helpful measures in the interest of the transportation agencies and of benefit to the public at large. The problem is of widespread national importance."

Milwaukee And North Western Merger Proposed

Protective committees for the Chicago & North Western common stock and the Chicago, Milwaukee, St. Paul & Pacific's preferred stock have submitted a proposal to the managements of both roads suggesting the consolidation of the two railroads into a new and closely integrated system. The merger details are tentative "because not only must they be criticized by the managements but by a number of other interested parties" before a final draft appears. The two committees contend that their plan would result in operating economies of $10,000,000 a year if adopted. The North Western's committee expects to have a definite plan ready for filing with the Interstate Commerce Commission in the near future.

City Votes $3500 To Aid Rutland

Rutland, Vt., gives $1000 and waives $2500 water bill; ox-cart publicizes aid fund

A city government pledged itself to contribute toward the continued operation of the shaky Rutland Railroad a total of $3500 when the Board of Aldermen of Rutland, Vt., at its meeting held on the evening of Monday, August 15, voted unanimously to appropriate the sum of $1000 to the campaign fund of the Rutland Railroad Co-operating Traffic Association and, further, to abate water assessments levied on the road for the period of one year, amounting to more than $2500, according to the "Rutland Herald." Reminiscent of the "hey-days" of railroad construction when towns feverishly purchased the bonds of projected lines through fear of being left "off-line" in the rapid spread of the railroad network, the action of the city's governors is in response to the appeals of an association formed by business men along the railroad for a $15,000 working fund to enable it to promote traffic for the Rutland and ensure its continued operation. The appropriation was recommended by Mayor H. H. Branchaud.

That same day, a two-wheeled, canvas-covered cart hauled by two yoked oxen creaked through the streets of the city, driven by the owner of a local inn dressed in a pioneer's costume of coonskin cap and buckskin jacket and trousers. On the sides of the cart were spread posters carrying the legend, "Shall We Go Back to This? Join the 'Save the Rutland Club'." There hung from one end of the ancient vehicle an iron kettle into which passers-by might throw voluntary cash contributions to support the newly-organized "Save the Rutland Club." The latter, according to the local press, is open to everyone; no fees are charged and one joins by affixing his signature to the roster, whereupon he is provided with an identifying membership button. It is further reported that members pledge themselves to ship and travel on the Rutland when possible and to influence others to do likewise. It is expected that the new "club" will supplement the activities of the Rutland Railroad Co-operating Traffic Association, a subscription-membership group of business men whose activities and aims have been described previously in these columns.

(*Continued on page 292*)

Mediation Board Q. T. on Wage Talks

Parleys on, but no word is given to press—wage cut brings C.N.S.&M. strike

Mediation of the railroads' proposal to reduce wages 15 per cent, which started before the National Mediation Board at Chicago on August 11, continued this week. The three members of the board, Chairman William H. Leiserson, George A. Cook, and Otto S. Beyer have been holding separate meetings with the Carriers Joint Conference Committee, the Railway Labor Executives Association (representing 18 organizations of railway employees) and the Brotherhood of Railroad Trainmen in an effort to bring about an agreement. Each day the board has met with one or more of these. As mediation entered its second week there was no evidence of either group yielding. To date Chairman Leiserson and his associates have declined to make any statement, in accordance with their announced intention to maintain silence until an agreement is reached or mediation efforts fail.

During the negotiations with the carriers, which began on July 18 and ended in a deadlock on August 3, when the services of the National Mediation Board were invoked, the Brotherhood of Railroad Trainmen elected to act independently of the Railway Labor Executives Association from which it resigned in June, 1937. So far, the Mediation Board has continued this practice of meeting separately with each of the two groups of employees.

As mediation of the steam railroad wage dispute proceeded, 1300 employees of the Chicago, North Shore & Milwaukee, an electric line operating freight and passenger service between Chicago and Milwaukee, struck on August 15, in protest against the company's refusal to arbitrate a proposed 15 per cent cut in wages and enter into a new contract. For 19 years the company has operated under a contract with the Amalgamated Association of Street & Electric Railway & Motor Coach Employees of America, an affiliate of the American Federation of Labor, and when the last contract expired on May 31, it was continued through written agreement, with a 30-day cancellation clause. At the same time the Brotherhood of Locomotive Firemen & Enginemen, the Brotherhood of Electrical Workers, the Brotherhood of Railroad Trainmen, and the Order of Railroad Telegraphers have been contesting with the Amalgamated union before the National Labor Relations Board for the right to represent the employees in collective bargaining.

Negotiations for a new contract failed and on July 15, the receivers invoked the 30-day clause and announced a reduction in wages. Union employees voted not to work without a contract after August 15, and urged that the company submit the issue to arbitration. A master in chancery found with the receiver that declining revenues necessitated a 15 per cent cut in pay if the lines were to continue operation and recommended to the federal district court a new wage scale with a progressive restoration of the cut with improving business. With the approval of the court, the company refused to arbitrate and members of the Amalgamated voted to strike. Other employees of the rival brotherhoods took similar action. On August 16, service was suspended and the Department of Labor assigned Harry E. Scheck of its conciliation service to attempt to settle the strike.

Calls "Decay" of I. C. C. Example of Unsound Regulation

The "decay of the Interstate Commerce Commission" is cited as an "admirable illustration" of "how it is often unsound to have government boards making regulations without assuming responsibility for the results," in a memorandum prepared by Assistant Secretary of State A. A. Berle, Jr., for the Congressional committee investigating monopolies. Mr. Berle covers many other subjects, including labor unions, in which connection he thinks "some consideration ought to be given towards the possibility of uniform labor schedules in competing industries."

The reference to the I. C. C. comes in a discussion of "Control by Regulation," wherein Mr. Berle goes on to say that in any regulatory set-up "there is always the certainty that at some stage in the history of a regulative body, the regulations will be used for purposes which are either corrupt, political or doctrinaire. Any of these three may produce violent and unhealthy results. On the other hand, he sees a beneficial side of regulation, because "there are certain fields in which we are not prepared for either monopoly or for public ownership, yet where planning is essential to a secure economy."

In connection with the privileges granted to labor unions Mr. Berle suggests, among other observations, that "it is possible that it would be found that labor contracts which were non-uniform were as dangerous as railroad rebates used to be in the olden days—thus, that it is as dangerous to allow discrimination to labor unions as to public service agencies."

New Pick Up and Delivery Tariffs Approved

The Interstate Commerce Commission, on August 12, voted not to suspend tariffs abolishing free pick up and delivery service recently filed by 24 eastern carriers including the New York Central, Boston & Maine, and Delaware & Hudson. The details of the new tariffs were outlined in the *Railway Age* for July 23, page 166. Protests had been filed by several large shippers in the eastern territory.

I.C.C. Acts to Halt Motor Rate Wars

Fixes minimum schedules for truckers in Central and New England territories

Exercising its minimum rate powers in comprehensive fashion, the Interstate Commerce Commission, Division 5, this week issued two decisions designed to stop destructive rate wars among common carrier truckers in Central and New England territories. The decisions, respectively in Ex Parte No. MC-21 and Ex Parte No. MC-22, in general, but with exceptions, prescribe as reasonable minimum class and commodity rates scales which had been agreed upon in conferences among the truckers involved; and while the commission does not appear satisfied with all details of the adjustment it nevertheless found that existing emergency situations warranted the taking of broad action while individual situations await correction through subsequent proceedings in the cases, both of which were kept open.

In the latter connection the New England decision pointed out that the commission there had before it all of the class rates and most of the commodity rates of all the motor common carriers subject to its jurisdiction in New England. "Never," it adds, "has the commission considered at one time the corresponding rates of the railroads in the same territory. Yet the rail situation is far less complex than the motor carrier situation." And while some expressed doubt as to the commission's authority under the Motor Carrier Act to issue its minimum-rate orders "without a more meticulous consideration of all of the multitudinous rates involved than is practical," the regulatory body itself entertained "no doubts on this point." It goes on to assert that the Motor Carrier Act "was designed for practical ends," and all of its provisions must be interpreted in the light of the declaration of policy which makes it the duty of the commission, among other things, to "foster sound economic conditions in such transportation and among such carriers," and to "promote adequate, economical and efficient service by motor carriers, and reasonable charges therefor" without "unfair and destructive competitive practices."

The commission praised the efforts of the carriers to bring about stabilization through conferences, pointing out, however, in the New England decision, that although "much of value has been accomplished, the desired stability is still elusive." Thus "disaster threatens and the only remaining recourse is to the power of the government;" and the commission was asked by the organized truckers to meet the emergency by establishing "a firm foundation for the construction of a reasonably stable and well-designed rate structure by fixing a bottom . . . which will set a limit to rate cutting."

The Central territory case appears to have presented fewer complications than

the New England situation, which latter covers also rates to and from the border territory in eastern New York and northeastern New Jersey. The decision in the former occupies only 23 mimeographed sheets as compared with the New England decision's 41. The Central territory proceeding arose out of the petition of the Central States Motor Freight Bureau, Inc., which set forth the "deplorable financial condition" of truckers in general within that territory and asked for a minimum rate order as "the only means of preventing what it terms internecine rate wars." The Bureau is a corporate agency through which about 750 common carrier members and 550 other truckers publish their tariffs and "strive for uniform action." In addition to these 1,300 conference carriers, which transport between 85 and 90 per cent of the traffic, there are in Central territory about 1,000 other common carrier truckers, which generally make and publish their rates independently of the Bureau.

The decision next describes the conference tariffs and the conference class and commodity rates. The class rates are subject to the National Motor Freight Classification and are generally on the same basis as those of competing rail carriers, although they observe the rates of competing carloading and forwarding companies as maximum. Most of the commodity rates published by the Bureau are contained in three so-called area tariffs, which "were compiled as a result of a great number of meetings held throughout the territory, to which all known carriers, both members and non-members of the Bureau, were invited." Among the troublesome non-conference rates are those published by carriers which serve only a limited number of key points; these carriers "are little interested in the general rate level and will make rates to get business regardless of whether they are less than rates on the same commodities for equal distances between other points."

The revenue and expense data submitted in response to the commissions' questionnaire revealed that 200 Central-territory truckers as a group lost $434,833 in 1937 and $607,617 in the first two months of 1938. The commission estimates that the all-expense costs of the carriers involved have increased 20 per cent since 1935; and the rate increases made following the railroads' Ex Parte 123 boost "are said to have been the salvation of numerous carriers that otherwise would have gone into bankruptcy." There is, however, little reason to believe that such increases together with additional traffic which may be anticipated "will be sufficient to establish sound economic conditions in the motor carrier industry in this territory." In connection with its proposed class rates the Bureau contended that the truckers are unable to compete with railroads at equal rates for distances beyond 560 miles, and "have practically relinquished such traffic." In general the Bureau's proposal, including the adjustments after Ex Parte 123, will increase rates in Central territory about 12 per cent over those in effect prior to March 28.

After discussing criticisms of rates proposed on specific commodities the decision proceeds to a consideration of the theory that motor carrier rates should be based on cost of service. It points out in this connection that railroad rates have not been based on cost of service alone, and observes that "it requires no great penetration to perceive that such a method of making motor carrier rates cannot produce satisfactory results, so far as earnings are concerned, unless the rates of competitors are constructed in a similar manner." Until the cost-of-service theory comes into vogue generally, and while the competition makes it necessary for some motor carrier rates to go below the full allocated cost plus a reasonable profit, the decision adds, "there must be an opportunity to go above that standard on other rates, if adequate earnings are to be obtained."

The discussion of the objections to certain tariff rules and regulations closes with the assurance that, with the proceeding left open, "respondents will be expected to take prompt action looking to the amendment of their tariffs" for the purpose of remedying inequalities complained of and any others which may be found in the rate structure. It is not the commission's intention to freeze the situation as all parties will be afforded opportunity to petition for amendment or modification of the order. The findings prescribe the minimum rates by reference to conference-line tariffs, and a listing of exceptions. It is pointed out, however, that such use of the agency publications is not to be taken to mean that any respondent must participate in such tariffs or join any motor carrier association.

The New England proceeding grew out of the suspension of commodity rates filed by the New England Motor Rate Conference, which rates would have placed the participating carriers at a disadvantage in competing with other common carriers maintaining lower rates. The Conference asked the commission to prescribe the suspended schedules as minimum reasonable commodity rates, but it agreed with the New England Motor Freight Bureau and others, including the commission, that the situation also called for the prescription of minimum class rates. Unlike the class rates in Central territory, which follow the rail classification, the New England set up has been based, in theory at least, on motor carrier costs plus a reasonable profit. The class rates of some New England truckers, however, have been based on the national classification; and the commission thinks that the use of two different classifications is undesirable.

The evolution of the New England rate structure, the efforts of the organized section of the industry to bring about stability, and the inconsistencies in the present set-up are considered at some length—sending the commission through a discussion of details which, it says, "are of such multitude and variety that there is danger of failing to see the forest because of the trees." There are about 100 motor common carriers of property in New England for every carrier by railroad; and these motor carriers "have no noncompetitive traffic." They are "part of an industry which is still in its infancy, and they are struggling to conform to a system of public regulation which has only just begun and in which they, as well as we, are as yet inexperienced." In view of these other circumstances the commission saw danger that "we shall do too much, and without the study and consideration and knowledge of the basic facts that wise action requires." Nevertheless it was convinced upon the evidence that "an emergency does exist which requires action on our part."

After the above-mentioned reference to the unsuccessful efforts of New England truckers to save themselves, and the commission's assertion of its power in the premises, the decision turns to summary discussions of the class and commodity rates. In the former connection it notes that the New England and national classifications "are representative of two differing theories of motor carrier rate construction." From the standpoint of abstract reasoning, the commission goes on, there can be little doubt that the theory of the New England classification, based as it is on motor carrier conditions, is sounder than that of the national classification, which is based on rail rates. The former, however, is said to be weak in its disregard of "practical competitive conditions," such as were discussed in the Central case, as noted above. Nevertheless the commission thinks that "further experimentation with the two theories is clearly desirable." Thus the New England classification is accepted as the general measure of minimum reasonable class rates for that section. Likewise, the commodity rates under suspension are said to be such as will "provide the ground-work from which sound economic conditions in the industry can be gradually developed." The discussion continues to set forth various exceptions to the order, and to dispose of other questions raised during the progress of the proceeding. As in the Central territory case the rates are prescribed by reference to tariffs, with the same notation that respondents are not thereby required to participate in such tariffs or join any motor carrier association. Also, as in the other case, the proceeding is kept open for such later adjustments as parties may propose and justify.

The order in the Central territory case becomes effective on October 5; in the New England case on October 2.

Motor Carrier Reports

The Interstate Commerce Commission has issued notices to class I bus and truck operators, calling attention to an order, dated August 1, prescribing a quarterly and monthly report of revenues, expenses and statistics to be submitted beginning with the month of August and with the quarter ending September 30. Copies of the form to be used are attached to the notice. Class I carriers are those with average gross revenues of $100,000 or more annually.

New Canadian Wharfage Tariff Extended

The effective date of a new top wharfage tariff filed by the Canadian Pacific, the Canadian National and several inland water carriers has been postponed from August 15 to October 1 by reason of a

scheduled investigation and report to be made by the Board of Transport Commissioners on charges at Montreal, Que., Three Rivers, Quebec, St. John, N. B., and Halifax, N. S. Details of the new scale were reported in the *Railway Age* of July 23, page 169.

P. R. R. Shop Crafts Election

Plans are underway for an election under National Mediation Board supervision to determine the union which will represent the 30,000 to 35,000 shop craft employees of the Pennsylvania, it was revealed this week by Secretary Robert F. Cole of the Board. Contesting organizations in the election, the largest ever conducted by the Board, would be the American Federation of Labor's Railway Employees Department and the Brotherhood of Railroad Shop Crafts of America, Pennsylvania System. Two mediators of the National Mediation Board are now surveying the situation.

$300,000 for Missouri River

Among funds recently allotted by Acting Secretary of War Louis Johnson was an item of $300,000 for the Missouri river between Kansas City, Mo., and Sioux City, Iowa. The money, says the announcement, is "to provide for necessary revetment construction . . . the recent high water has resulted in extensive bank erosion."

The announcement goes on to point out that "commercial traffic on the Missouri river above Kansas City for the calendar year 1937 amounted to 566,706 tons valued at $4,098,350." Also, attention is called to the fact that "regular freight service on the Missouri river up to Kansas City was inaugurated in 1935 by the Inland Waterways Corporation."

July Operating Revenues 17.8 Per Cent Under Last Year

Preliminary reports from 91 Class I railroads, representing 80.2 per cent of total operating revenues, made public by the Association of American Railroads, show that those railroads, in July, has estimated operating revenues amounting to $240,924,393 compared with $292,983,939 in the same month of 1937 and $368,865,735 in the same month of 1930. The July gross was 17.8 per cent below that for July, 1937, and 34.7 per cent below July, 1930.

Freight revenues of the 91 roads in July, amounted to $189,845,553 compared with $233,025,902 in July, 1937, and $280,600,384 in July, 1930—18.5 per cent below the former and 32.3 per cent below the same month in 1930. July passenger revenues totaled $31,248,582 compared with $34,619,802 in July, 1937, and $54,592,671 in July, 1930—9.7 per cent below the former, and 42.8 per cent below 1930.

Railroad Retirement Account

The Daily Statement of the United States Treasury for August 10 shows the usual data published each month with respect to financial operations under the Social Security Act and the Railroad Retirement Act. Up to that date taxes on carriers and their employees had aggregated $150,923,724.39 while administrative expenses of the Railroad Retirement Board had totaled $4,625,450.92. Meanwhile the Railroad Retirement Account received appropriations by Congress in the amount of $264,750,000 and earned interest of $1,410,821.92—a total of $266,160,821.92. Benefit payments totaled $87,910,732.64 while the balance of $178,250,089.28 was accounted for by investments (3 per cent special Treasury notes) of $68,200,000 and unexpended balances to the credit of the appropriation ($96,486,595.96) and to the credit of the disbursing officer ($13,563,493.32).

Cheyenne Express Rate Hearing Reassigned to Salt Lake City

The Cheyenne, Wyo., session of hearings in connection with the Ex Parte 126 express rates case has been cancelled and the proceeding reassigned for hearing at Salt Lake City, Utah, on August 29. Commissioner Aitchison will preside. Other dates on the hearings schedule remain unchanged.

Section of Northern Trans-Andean Line Placed in Service

The long-contemplated northern Trans-Andean line proposed to run between Antofagasta, a seaport in northern Chile, across the continental divide to Salta, Argentina, a distance of 841 kilometers (521 miles), has been pushed further toward completion by the completion recently of a 55-kilometer (34-mile) stretch of meter (3.28-ft.) gage track between Augusta Victoria and Adolfo Zaldivar, located in the foot-hills of the Andes. Since the former point lies at the end of an existing meter-gage line of the privately-owned Antofagasta & Bolivia railway, a through line to Antofagasta is afforded by the new construction. Two motor rail-cars mounted on a standard motor truck chassis, with a capacity of 16 passengers and two tons of freight, have been placed in operation over the new line, on a semi-weekly schedule in each direction.

U. S. Tariff Commission Surveys Iron and Steel

The United States Tariff Commission has issued a 527 page survey on Iron and Steel covering the industries and international trade of the principal producing and trading countries, with particular reference to factors essential to consideration of the tariff. The report treats transportation problems at some length, indicating the restrictive effect of transportation costs on plant location and also upon international trade, particularly the penetration of foreign steel to interior markets of the United States. A section is devoted to the part that the railroads play in the steel industry, showing how the carriers haul the ore to the Duluth and Superior docks and then transport it from the lake ports to such centers as Youngstown, Pittsburgh and Gary. The report also gives the freight rates on the various hauls that involve the railroads.

According to a commission announcement, the report embodies comprehensive and up-to-date information respecting the iron and steel industries, and its issuance at this time is opportune because of recent important changes in the industry and international trade in many parts of the world.

May Accident Statistics

The Interstate Commerce Commission's completed statistics of steam railway accidents for the month of May, 1938, now in preparation for the printer, will show:

Item	Month of May 1938	Month of May 1937	5 months ended with May 1938	5 months ended with May 1937
Number of train accidents	394	707	2,304	3,933
Number of casualties in train-service and nontrain accidents				
Trespassers:				
Killed	211	251	793	909
Injured	260	252	883	929
Passengers on trains:				
(a) In train accidents*:				
Killed	....	....	3	....
Injured	20	58	163	221
(b) In train-service accidents:				
Killed	3	1	10	4
Injured	172	144	792	736
Travelers not on trains:				
Killed	1	1	2	8
Injured	44	50	322	331
Employees on duty:				
Killed	28	49	202	308
Injured	1,105	1,976	6,348	9,982
All other nontrespassers†:				
Killed	139	146	619	817
Injured	382	553	2,293	3,032
Total—All classes of persons:				
Killed	382	448	1,629	2,046
Injured	1,983	3,033	10,801	15,231

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than $150 to railway property.

† Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers*, were as follows:

Number of accidents	227	316	1,409	1,922
Persons:				
Killed	126	132	590	754
Injured	245	374	1,683	2,229

Consumers' Counsel Seeks Volunteers for Coal-Rate Wars

Under the heading "New Rail Rate Fight Looms" the latest issue of the Coal Consumer Digest, put out by the office of the Consumers' Counsel, calls upon consumers of bituminous to supply facts to enable that office "to make a real fight" against what "it is believed" is the railroad plan to ask for a continuance beyond the December 31 expiration date of the Ex Parte 115 increase in bituminous coal rates, and the likelihood that the carriers at the same time will ask for the additional increases on bituminous disallowed in Ex Parte 123. It was reported this week in well-informed railroad traffic circles that there is "nothing to" the latter, while in connection with the former the railroads are, of course, expected to file a petition to continue the Ex Parte 115 boost beyond the end of the year.

Consumers' Counsel promises to oppose either or both moves on the part of the carriers and asks bituminous consumers to write his office immediately if they are disposed to aid in the fight. "We would," says the statement, "like to go before the commission with a representation of consumers from every bituminous coal consuming district in the country. To do this we must start now to organize. . .

"We want to hear from consumers from all sections who are interested in this subject. It is your fight and we are your

advocate. Write us immediately if you will volunteer to organize consumers in your territory to protest either by appearances or otherwise against these increases."

Freight Car Loading

Loading of revenue freight for the week ended August 6 totaled 584,050 cars, a decrease of 4,653 cars or 0.8 of one per cent below the preceding week, a decrease of 182,132 cars or 23.8 per cent below the corresponding week in 1937 and a decrease of 335,731 cars or 36.5 per cent below the same week in 1930. All commodity classifications except coal, ore and coke showed increases over the preceding week, while all commodity classifications except grain showed decreases under last year. The summary, as compiled by the Car Service Division, Association of American Railroads, follows:

Revenue Freight Car Loading

For Week Ended Saturday, August 6

Districts	1938	1937	1936
Eastern	114,509	149,792	146,109
Allegheny	104,299	157,429	146,087
Pocahontas	40,270	51,748	51,315
Southern	85,365	99,995	96,837
Northwestern	92,744	133,949	124,622
Central Western	101,734	116,363	107,928
Southwestern	45,129	56,906	55,473
Total Western Districts	239,607	307,218	288,023
Total All Roads	584,050	766,182	728,371
Commodities			
Grain and Grain Products	51,519	45,936	46,446
Live Stock	11,276	13,505	14,717
Coal	90,927	111,575	114,524
Coke	4,487	9,645	8,450
Forest Products	28,895	40,960	35,183
Ore	22,998	75,561	54,206
Merchandise l.c.l.	149,243	168,598	165,722
Miscellaneous	224,705	300,402	289,123
August 6	584,050	766,182	728,371
July 30	588,703	779,091	747,529
July 23	580,882	767,470	730,981
July 16	602,300	766,384	720,359
July 9	501,013	678,958	724,277
Cumulative Total, 31 Weeks	17,087,250	22,798,260	20,351,178

In Canada.—Car loadings for the week ended August 6 totaled 40,306, as compared with 43,838 for the previous week and 47,739 for the corresponding week last year.

North Western Explains Cash Crisis to Employees

In a letter placed in the pay envelopes of its employees early in August, the Chicago & North Western explained the road's present critical situation, because "the railroad problem is one in which all employees are interested, and is not a problem for bondholders, stockholders, or management alone." The letter pointed out that the company failed to earn its operating expenses and taxes in the first six months of 1938 by $2,319,000. "Had it not been possible to use the greater part of the depreciation fund of over $2,500,000, which should have been set aside for the replacement of worn out equipment, and had it not been possible to defer certain other payments until a later date, the company would have been unable to meet its current pay rolls and taxes," the letter said. The letter also stated that a charge of $1,000,000 for the rent of freight and passenger cars, the use of joint facilities and other items brought to a total of $3,500,000 the amount by which the road failed to earn its operating expenses. "This is the net result of operation," the letter continues, "with no allowance for interest on debt. In this connection it should be remembered that the North Western has paid no dividends for more than seven years and has not paid the interest, nor any part of the interest, on its mortgage debt since its bankruptcy July 1, 1935.

"Summing up the situation, the principal loss of the North Western for this six month period, compared with a corresponding period of 1937, is a decrease of $6,071,142 in gross operating revenue, and a deficit for the same period of $3,500,000 in net operating income." The letter also said, "that in the six months there was a decrease of 5,400 in the average number of employees from a year ago. Wages lost by these employees totaled $4,228,000. Increased pay to those working was $1,597,000. The net pay roll decrease was $2,631,000."

Richmond Greyhound-Peninsula Transit Case Reopened

The Interstate Commerce Commission, Division 5, has reopened for rehearing the case wherein the Division denied the application of the Richmond Greyhound Lines, affiliate of the Richmond, Fredericksburg & Potomac, for authority to acquire control of the Peninsula Transit Corporation. Division 5's adverse decision, reviewed in the *Railway Age* of March 26, page 583, turned upon its interpretation of the Motor Carrier Act's section 213 which requires that when railroads are involved in acquisitions of motor carriers there must be a showing that the proposed transaction will enable "such carrier other than a motor carrier to use service by motor vehicle to public advantage in its operations, and will not unduly restrain competition."

For purposes of the decision Division 5 assumed, "although we do not so find," that the R. F. & P.'s 49 per cent interest in Richmond Greyhound does not give the railroad control or power to exercise control. It went on to point out, however, that section 213 "is not alone concerned with control, but also with management in a common interest."

Latimer Would Use WPA to Dig Out Pension Records

Murray W. Latimer, chairman of the Railroad Retirement Board, is endeavoring to effect arrangements with the Works Progress Administration whereby furloughed railway employees, eligible for WPA work relief, would be assigned to railroad offices for the purpose of bringing up to date the service records of prospective pensioners. It is pointed out that the plan would aid the railroads because the reliefers would be working on a job which the railroads are required to do under the terms of the Railroad Retirement Act; also, it should put the records in shape to permit the Retirement Board to act promptly on applications for annuities.

Soundings indicate that the railroads, after some manifestations of misgivings, would on the whole be disposed to go along; while labor is also reported to be willing, provided the standard daily rate of wage is paid to reliefers, and only furloughed railroaders are given the jobs. It is estimated that the project could give employment to from 15,000 to 20,000 men for one year on the part-time basis, which acceptance of the labor organizations' going-rate stipulation would impose. WPA monthly maximum wages for the type of work involved range from about $60 to about $95, giving an estimated range of from 12 to 13 days a month which the furloughed railroaders could work at the standard daily rate.

Actual consummation of the plan may be a long-drawn-out process, because it has not been possible to obtain a WPA grant on a national basis. The bulk of the WPA money has been allotted to the states, and the matter must be taken up in each state separately. Representatives of the Retirement Board are now pushing the idea in the field, although no state approval has yet been arranged.

Under the plan an attempt would be made to assign the WPA workers to railroads from which they were furloughed, although a furloughed worker would have to qualify for relief before he would be eligible for the WPA aid. The workers would be certified by WPA officials, but the railroads would have the right to veto the assignment of anyone they did not want working in their offices. The reliefers would get no credit for railroad service under the Retirement Act for the time spent on the WPA project.

In addition to their work in railroad offices on the basic records, tentative plans contemplate that WPA workers would staff a central office for compiling and correlating the data. This office, it is believed, would have to be at some point outside Washington, since the Capital would not have on its relief rolls enough furloughed railroaders with the required experience.

Non-Attorney Practitioners Must Now Take I. C. C. Examination

Applicants for admission to practice before the Interstate Commerce Commission, who are not attorneys-at-law admitted to practice before the Supreme Court of the United States or the highest court of any state or territory or the District of Columbia, will hereafter be admitted to practice before the commission only upon written examination. The ruling applies to all applications received after August 2 and the examination will be designed to make the applicant show that he is (in the words of the commission's rules of practice) "possessed of the necessary legal and technical qualifications to enable him to render valuable service before the commission and is otherwise competent to advise and assist in the presentation of matters before the commission."

The notice, signed by Acting Secretary George W. Laird, outlines the procedure to be followed by applicants involved, and reveals that examinations will be conducted three times a year at Washington, "or, upon timely request being made, at a district office of the Bureau of Motor Carriers, in cities where such offices are maintained, or in other cities, at the office of the commission's Bureau of Accounts or

Service Agent of the commission." "The examination," the notice continues, "will test the applicant's knowledge of (1) structure and history of the Interstate Commerce Act, as amended, and related acts, (2) the Commission's rules of practice, (3) the general rules of evidence, (4) the leading cases involving the Commerce Clause of the Constitution and the Interstate Commerce Act, and their significance, and (5) the principles of legal ethics. The decision as to admission or non-admission of candidates will be made upon the basis of the applications, the returns of sponsors and those to whom applicants have referred, and the examination papers."

The examinations will be conducted three times a year—the first Tuesday in January, May and September of each year. In view of the shortness of time and the limited number of applications pending, the examination scheduled for September, 1938, will be omitted.

I. C. C. Passes on Tie-Up Between Northland Greyhound and G. N.

The Interstate Commerce Commission, Division 5, has decided to deny applications of the Northland Greyhound Lines, affiliate of the Great Northern, for authority to purchase certain operating rights of Hiawatha Trails, Inc., Northwestern Motor Bus Company and Gray Transportation Company, unless the applicant within 30 days files additional pleadings requesting further proceedings in which to justify the proposed transactions under the Motor Carrier Act's section 213(a). This stipulation is based on the finding that Northland Greyhound is affiliated with the Great Northern within the terms of section 5(8) of Part I of the Interstate Commerce Act and thus there must be the showing under Part II's above-mentioned section 213 that the acquisition will enable the railroad to use the service by motor vehicle "to public advantage in its operations, and will not unduly restrain competition."

Commissioner Eastman dissented, pointing out, among other arguments, that the test of affiliation under Part I's section 5(8) is whether "it is reasonable to believe that the affairs of any carrier of which control may be acquired by such person (one held to be affiliated with a carrier by reason of his relationship to it) will be managed in the interest of such other carrier." As the vendors' operating rights are not in the territory served by the Great Northern, Mr. Eastman found it "difficult to see" how they could be used in the interest of that road.

After describing the applications and denying the subsequent petition for temporary approval of operation by Northland of the properties sought to be acquired, the majority report described the tie-up between Great Northern and Northland. As of April 6, 1938, the latter's voting stock was owned 49 per cent by the Greyhound Corporation, 46 per cent by the railroad and 5 per cent by the public. Under a voting trust agreement, as amended January 12, 1938, each of the two principal owners deposited 52,000 shares with a trustee, until such time as the Greyhound Corporation acquires a 51 per cent interest in Northland, but not later than June 1, 1945. Meanwhile, the Great Northern has four representatives on the Northland board and its president is a member of the executive committee.

As stated above in the reference to Mr. Eastman's dissent the vendors' routes are not in Great Northern territory. Hiawatha, now in process of reorganization, formerly operated bus services principally between Calumet, Mich., and Detroit, and between Calumet and Garnet; Northeastern operates between Ironwood, Mich., and Iron Mountain, via Crystal Falls and Florence, Wisc.; Gray operates between Green Bay, Wisc., and Iron, Mich., between Escabana and Spalding and between Menominee, and Pound, Wisc.

Northland Greyhound supported its contention that it is not affiliated with the railroad within the meaning of the statute by arguing that it is controlled by the Greyhound Corporation and the Great Northern's holdings of its stock are "solely for investment;" and that the physical operations of the two companies are conducted independently, being in direct competition between many points. After citing the Richmond Greyhound-Peninsula case (which has just been reopened as noted elsewhere in this issue) the majority expressed the view that the railroad's financial interest ($821,000) together with its representation on the bus company's board and executive committee, negatives the solely-for-investment contention and "clearly indicates that the railroad . . . . participates in the management." The second point—the independent operating set-up and the competition between the applicant and the railroad—is said to be based on circumstances that only incidentally affect the question of affiliation; and which a shift in policy would change.

Mr. Eastman did not think that the Richmond Greyhound-Peninsula case was analogous because the Richmond, Fredericksburg & Potomac's tie-up with Richmond Greyhound went into such things as coordinating and joint facility arrangements and gave the railroad a veto on the affiliate's purchase or establishment of bus lines in R. F. & P. territory. Also, Mr. Eastman adds, Peninsula is competitive with the R. F. & P.'s Richmond-Washington line, whereas none of the lines sought to be acquired by Northland are in Great Northern territory. Furthermore, the fact that the railroad has minority representation on Northland's board and executive committee "is consistent with stock ownership for investment purposes."

The former co-ordinator has no doubt that Great Northern anticipated a co-ordinated set-up, in which connection he goes on to cite the Motor Carrier Act's purpose, among others, "to improve the relations between, and co-ordinate transportation by and regulation of, motor carriers and other carriers." Also, he points out that the Motor Carrier Act "in no way contemplates a complete divorcement of railroad and motor carrier operations." On the contrary, he adds, it expressly permits it, subject only to special proof of ability to use the motor service to advantage, and of no undue lessening of competition. In this case it does not appear that the lines Northland proposes to acquire could be used in the interest of the Great Northern, and he would grant the application.

I. C. C. Will Hereafter Enforce Motor Act's Merger Provisions

The Interstate Commerce Commission has served notice on the motor carrier industry that it will hereafter prosecute violators of the Motor Carrier Act's section 213, which is the one dealing with consolidations, mergers and acquisitions of control. The notice, issued by Secretary W. P. Bartel, asserts that in view of the amendments to the act adopted at the last session of Congress, "and of the fact that the provisions of the section are now better understood than they were in the early days of regulation, it is clear that the time for leniency in the enforcement of its provisions has passed."

Mr. Bartel led up to the foregoing assertion by reference to "numerous instances" of violations of section 213 which have come to the commission's attention, but which "have not been permitted to be a necessary bar to subsequent authority sought under that section as to the motor carrier unlawfully acquired in the particular instance, principally because of the unfamiliarity of many motor carriers with the meaning of that section in the early days of regulation." To illustrate the notice cited the commission's decision in No. Mc-F-277, Potashnick Truck Service, Inc. —Control—Bryant, which was served at the same time.

The notice then goes on to refer to the recent amendments enacted at the commission's recommendation, adding that such amendments changed the act "in two respects which are very important" in connection with section 213 violations. That section itself was changed "so as to make it clear that we can prosecute under the general enforcement provisions for violations, as well as institute dissolution or divestment proceedings." In the above-mentioned Potashnick decision the commission explained its reluctance to institute dissolution proceedings because such would punish the public as well as the parties in cases where it was shown "that the transaction which had unlawfully been consummated was otherwise in the public interest." Also, the recent amendments (the new section 210a(b) give the commission power to protect the public interest through grants of temporary authority to a prospective parent company to operate its prospective subsidiary's lines pending the disposition of the merger application.

The notice also calls attention to "the forthcoming release of rules and regulations governing transfers of rights to operate as a motor carrier in interstate or foreign commerce, applicable to transactions other than under sections 210a(b) and 213.

Investors' Group Organizes Seven State Units

The National Conference of Investors reports that preliminary organization work has been completed in connection with the formation of state units in seven states—namely, Virginia, New York, Texas, North Dakota, Oklahoma, Pennsylvania

and Idaho. Hence, in each of these states, a chairman has been named, an organization committee set up and the machinery made ready to build up memberships representing all classes of railroad bond and stock holders.

Organized as a non-profit, membership corporation under the laws of Delaware, the National Conference of Investors seeks to build up a large body of railroad security holders in the effort to make articulate their interests in the carriers. It plans to carry on its work through individual state units, having wide local representation, in the hope that countrywide backing for legislative programs and other aids for the carriers may be found. Each state unit is to be independent and self-governing, with representations on the board of directors of the national association, as was described in the *Railway Age* of May 21, page 887.

The New York unit, which has jurisdiction over a state having by far a larger proportion of railroad security holders than any other, has completed its preliminary organization work with the formation of an organization committee of fifty prominent business executives located in communities throughout the state, the chairman of which is F. D. Russell, president, Security Mutual Life Insurance Company, with headquarters at Binghamton. Thus diffusing the power of the association in local communities, it is believed, will effectively answer the pet opposition criticism that any organization to protect investors' interests is *ipso facto* a "tool of Wall Street."

The chairman of the unit has prepared a letter for circularization of prospective members of the association informing them of its aims and organization and soliciting their support. In this connection, it is pointed out that the membership fee has been set at ten cents per bond owned and one cent per share of stock held. The letter goes on to report that the major concern of the carriers in the near future must be the passage of remedial legislation and that the "mobilization" of the 2,000,000 railroad investors into state units will accomplish much in securing the passage of such legislation. A copy of the six-point emergency and 13-point "long-range" legislative program adopted by the Association of American Railroads is to be attached to each letter.

City Votes $3500 to Aid Rutland

(*Continued from page 286*)

Subscriptions to the $15,000 working fund sought by the latter association to support its "Ship Today the Rutland Way" traffic-promotion campaign already totaled $2,705 at the close of August 14, representing returns from business men located in the city of Rutland alone, according to Albert A. Cree, chairman of the campaign committee and president of both the Rutland and state Chambers of Commerce. Subscriptions received from business firms range from $500 to $10, and the subscribers' list includes a newspaper, a public utility corporation, a feed concern, a hotel, several clothing distributors, an insurance agency and a "style shop." Individual subscriptions of from $250 to $5 are recorded.

Those merchants supporting the fund campaign have been supplied with placards for window display which carry the message: "We have joined the Rutland Railroad Co-operating Traffic Association. Have you? Send contributions or pledges to Miss Lula M. Tye, Chamber of Commerce office, Mead building. 'Ship Today the Rutland Way'." The campaign committee has sent to over 300 prospective subscribers copies of a letter asking their aid in the effort to put the Rutland back on its feet. The opening paragraph reads: "Help wanted. The Rutland Railroad problem is not yet solved. The employees have made it possible to continue to run engines. Will you do your part?"

Messrs. Richard Overton and John W. Wright were erroneously reported as the initiators of the traffic campaign plan in the *Railway Age* of August 6. In reality, they were the authors of a separate plan for the permanent rehabilitation of the road, which was submitted to Judge H. B. Howe of the federal district court of Vermont for whatever use the court or its agents might wish to make of it. The plan was summarized in that issue. The Rutland Railroad Traffic Co-operating Association, on the other hand, was organized by Mr. Cree, its present chairman. Details of its aims were presented in the *Railway Age* of August 13, page 261. Subsequent to issuance of the preliminary statement there reprinted, Mr. Cree on several occasions has emphasized that the association will in no way seek to outline or encourage any particular proposal for wages, working agreements, treatment of security holders or operation of the Rutland road, but rather will confine itself to the problem of getting more traffic for the railroad.

William B. Poland, consulting engineer, has been appointed by Governor G. D. Aiken of Vermont to undertake a study of the Rutland and render a report for the use of the state executive office and legislature in dealing with the railroad's troubles when the latter body convenes next winter. In announcing the appointment, Governor Aiken made it clear that the survey is not to be made "for the purpose of fixing the responsibility for the present condition of the road" but will serve "to gather facts which will be of value to the executive office and the Legislature."

Mr. Poland, whose headquarters are at Washington, D. C., has served as a member of ex-Co-ordinator Eastman's research staff, and has been connected at various times with railroads and railroad investment groups abroad. His posts included general manager and chief engineer of the Alaska Central; vice-president and general manager of the Philippine Railways; director-general of railway and port constructions, Yugoslavia; director-general of railways, Imperial Government of Persia; and expert in railway finance and reorganization for the Chinese Government.

Equipment and Supplies

LOCOMOTIVES

THE INLAND STEEL COMPANY has ordered from the Plymouth Locomotive Works, a 45-ton, 320 hp. direct drive Diesel Flexomotive for service in its open hearth division. This locomotive is designed for direct drive up to 70-tons weight. A 60-ton, six-wheel Flexomotive is also now under construction by the Plymouth Locomotive Works for the Inland Steel Company, for later delivery.

FREIGHT CARS

THE ILLINOIS CENTRAL is asking for prices of parts for 1000 box cars.

THE CHIEF OF ENGINEERS, UNITED STATES ARMY, Washington, D. C., received bids on August 16, for from 5 to 35 tank cars of 10,000 gal. capacity, for carrying gasoline.

IRON AND STEEL

THE ERIE has placed orders for 2,127 tons of 112-lb. rail and 1,236 tons of 131-lb. rail, with the necessary track fastenings. The rail was divided between the Carnegie-Illinois Steel Corporation and the Bethlehem Steel Company.

SIGNALING

THE ILLINOIS TERMINAL will receive bids at 710 North 12th boulevard, St. Louis, Mo., until 10 a. m. (c.s.t.), August 29, for the furnishing of signal material to be used in connection with highway grade protection at two locations in the State of Illinois.

ATLANTIC COAST LINE—Bids will be received by this road at Wilmington, N. C., until 12 o'clock noon, August 27, for the furnishing of the necessary materials for the installation of flashing light highway crossing signals at Drivers, Va. F. H. Fechtig is purchasing agent.

THE CHICAGO & EASTERN ILLINOIS will receive bids at the office of the purchasing and stores agent, 332 South Michigan avenue, Chicago, until 10 a. m. (c.s.t.) August 31, for the furnishing of signal materials to be used for installation of highway grade crossing protection at two crossings in the State of Illinois.

SEABOARD AIR LINE—The Union Switch & Signal Co., has received an order from the Electro-Motive Corporation for six sets of continuous automatic train control equipment, for installation on Diesel-electric locomotives which are being built for the Seaboard Air Line. This equipment is arranged for operation as a three indication cab signal system with two speed control and will be used over the Richmond, Fredericksburg & Potomac, in the territory now equipped with continuous cab signaling and train control between Richmond, Va., and Washington, D. C.

Supply Trade

R. J. McCabe has been appointed manager of sales, electrical materials, for the **Indiana Steel & Wire Co.**, Muncie, Ind. Mr. McCabe previously served for nearly 30 years with the Western Electric Company and the Graybar Electric Company, having joined the Western Electric at Dallas, Texas, in 1909. In 1927 he became service manager of the Boston, Mass., office of the Graybar Electric Company and in 1932 was appointed New England district manager.

Frank D. Newbury, has been appointed manager of the New Products division of the **Westinghouse Electric & Manufacturing Co.**, to succeed Herbert M. Wilcox, deceased. In addition, Mr. Newbury will continue his present duties as economist for the company. He was born in Brooklyn, N. Y., and was graduated as a mechanical engineer from Cornell University in 1901. He has occupied a number of positions from apprentice to general manager of machinery engineering over a period of 30 years. He edited the Electric Journal when it was established in 1904, and was president of the Electric Club (now the Westinghouse Club) during 1906 and 1907. From 1918 to 1930, he was active in the American Institute of Electrical Engineers, as a director from 1918 to 1922, and as a member of the standards committee and rotating machinery committee. He was one of the representatives of the American Institute of Electrical Engineers on the American Standards Association. In 1935, Mr. Newbury became assistant to the vice-president, in connection with budgets and other administration problems, and later economist.

The Westinghouse Electric & Manufacturing Co. has consolidated its transportation and generator divisions, and **Frank Howell Stohr,** manager of the generator division since last December, has been appointed manager of the combined transportation and generator division, with headquarters at East Pittsburgh, Pa. **Frank B. Powers,** formerly manager of transportation engineering, becomes engineering manager of the combined divisions. Mr. Stohr was born in Muscatine, Iowa. He joined the students' course at Westinghouse immediately after his graduation as an electrical engineer from the University of Iowa in 1922. He first served in the generator section, and has continued his association with this division. In 1926, Mr. Stohr was made manager of the generator section and in 1931, when the generator and substation sections were combined, he was appointed manager of the new department. Five years later, he became sales manager of the generator division.

Mr. Powers was born in Chicago and attended both engineering and design schools while in the Westinghouse graduate student course after graduating from the University of Chicago. He received his first practical experience in the electric traction field while servicing the 6,000 hp. motors on locomotives of the Virginian Railway. After this assignment, he joined the heavy traction section of the Westinghouse railway engineering department. In January, 1935, he was promoted to section engineer of all direct current traction motors and later was appointed manager of engineering of the transportation department.

J. F. Linthicum, who has been elected president of the **American Lumber & Treating Company,** Chicago, as announced in the *Railway Age* of August 13,

J. F. Linthicum

graduated from St. John's College at Annapolis, Md., in 1902, and during the ensuing eleven years held a number of positions as chemist in eastern industrial and mining companies, including four years in Cuba. He became associated with the Aluminum Company of America in 1913 when he was placed in charge of all mine exploration and development work of the American Bauxite Company at Bauxite, Ark. Four years later, he was transferred to East St. Louis as technical superintendent of the No. 2 Works of the Aluminum Ore Company, another subsidiary of the Aluminum Company of America. During the war, he held a number of civilian appointments, and then returned to the Aluminum Company as a specialty salesman at Cleveland, Ohio. He was transferred to Pittsburgh in 1925. Later he was promoted to division sales manager in charge of ingot, alloy and ore sales, which position he held until September 1, 1937, when he became executive vice-president of the American Lumber & Treating Company, which company he helped to organize in 1934 and of which he had acted as a director. He held the latter position until he was elected president on August 1, 1938. In 1928 he also took an active part in the formation of the National Aluminate Corporation, Chicago, and has been a director of this company for the last eleven years.

OBITUARY

Col. William A. Smethurst, of the sales department of the Baldwin Locomotive Works, at New York, died on August 12, at the Harkness Pavillion, Columbia-Presbyterian Medical Center, New York City, after five months' illness. Col. Smethurst was born 65 years ago in St. Augustine, Fla., and studied at Penn Charter School, Philadelphia, Pa. He entered the World war with the rank of major in the corps of engineers, was later promoted to lieutenant colonel. Since the war he had been in the service of the Baldwin Locomotive Works.

Charles Henry Tomlinson, formerly for 28 years sales engineer of the coupler division of the Ohio Brass Company, Mansfield, Ohio, died at his home in Mansfield, on August 10, following an illness of several months. He was born at St. Louis, Mo., on July 6, 1869, and spent the early years of his business career in the West until 1906, when he left the Denver Tramways to go with the Ohio Brass Company as sales engineer of its coupler division, from which position he resigned in 1933 on account of ill health. Mr. Tomlinson's work was identified with the development of automatic couplers for electric railways and more recently, tight-lock couplers for steam-railroad cars.

John A. MacLean, president of the MacLean-Fogg Lock Nut Company, Chicago, died in that city on August 13. He was born May 4, 1874, at Buffalo, N. Y., and entered the employ of the Corn Exchange Bank, Chicago, in 1892, with which organization he remained until 1902. From the latter year until 1905 he was in the employ of the Federal Trust and Savings Bank, Chicago, and from 1906 to 1909 was engaged in the insurance business. In

John A. MacLean

1910 he entered the employ of the American Locomotive Equipment Company, but a year later resigned to become associated with the Boss Nut Company, with which company he remained until 1925. In 1926 he was elected president of the MacLean-Fogg Lock Nut Company, which position he was holding at the time of his death.

TRADE PUBLICATION

DYN-EL.—The Alan Wood Steel Company, Conshohocken, Pa., has published a booklet entitled "A. W. Presents Dyn-el" in which is described the properties, manufacture and industrial applications of Dyn-el, a new high-strength flat-rolled steel. In this booklet, the applicability of this product for building light-weight struc-

tures, including railway freight cars, is stressed. In addition to the claims relative to its fitness for high-stress design and for reducing weight without reducing strength or safety, the new metal is said to have high resistance to corrosion. The qualities of this product, it is stated, are produced by means of a special treatment of quenching and tempering a low carbon steel at high temperatures, rather than by the addition of expensive alloys. The booklet includes many tabulations of the static and dynamic properties of Dyn-el and of its resistance to corrosion, and discusses the fabricating and welding properties of this material.

Construction

CENTRAL OF NEW JERSEY-READING.—The New Jersey Board of Public Utility Commissioners has ordered these railroads to carry out grade separation work at Woodbridge-Carteret road and Turtle Brook road in Middlesex County, N. J.

CHICAGO, ROCK ISLAND & PACIFIC.—A contract for the removal of approximately 20 miles of branch line and 5 miles of side tracks between Evans, Iowa, and Knoxville has been awarded by this company to the List & Weatherly Construction Co., Kansas City, Mo.

CHICAGO, ROCK ISLAND & PACIFIC.—Bids will be received by this road until August 31 for the removal of approximately 14.55 miles of main track and 0.78 mile of side tracks between Muscatine, Iowa, and Nichols, and 5.32 miles of main track and 0.42 mile of side track between Lone Tree, Iowa, and Iowa Junction.

CHICAGO, ROCK ISLAND & PACIFIC.—Two contracts have been awarded in connection with the rebuilding of this company's Bridge No. 3204, over the Salt Fork of the Arkansas river near Pond Creek, Okla., in which two 100 ft. deck plate girders will be replaced by one new 200 ft. through riveted truss span on new concrete piers 60 ft. high, which will cost approximately $175,000. The contract for the piers, amounting to about $70,000, has been awarded to Spencer and Ross, Detroit, Mich., and the contract for the fabrication of the new truss, amounting to approximately $31,000, was awarded to the American Bridge Co., New York. Railroad company forces will erect the steel.

ERIE.—This road has been ordered by the New Jersey Board of Public Utility Commissioners to carry out grade crossing elimination work on its lines at Rock road, Bergen County, N. J.

PENNSYLVANIA.—The Pennsylvania Public Utility Commission has approved the application for construction of a crossing over and above the two tracks of the Pennsylvania and one track of the West Penn Railroad in North Huntingdon township, Westmoreland County, Pa.

Financial

ATCHISON, TOPEKA & SANTA FE.—*Bus Purchase Proposal Withdrawn.*—The Interstate Commerce Commission has granted the petition of the Santa Fe Trail Transportation Company for authority to withdraw the application which it filed on May 6 for authority to assume obligation in respect of $540,812.50 of the purchase price of 45 new buses which it proposed to acquire.

BALTIMORE & OHIO.—*Dismissal of Petition Granted.*—The Interstate Commerce Commission, Division 4, has dismissed the petition of this company to continue, extend, or renew its assumption of liability as guarantor or otherwise, in respect of the payment of the principal and interest of the unpaid portion, $1,894,632, of a loan of $2,500,000 to the Alton by the Reconstruction Finance Corporation. The company has found that the commission had already granted it the desired authority.

CHICAGO, ROCK ISLAND & PACIFIC.—*Release of Collateral.*—The Interstate Commerce Commission, Division 4, has approved the release and return by the Reconstruction Finance Corporation to the Rock Island & Dardanelles of $100,000 of Rock Island & Dardanelles first mortgage five per cent bonds heretofore pledged and now held by the RFC as part security for a loan of $10,000,000 to the Rock Island. The commission has found that the Rock Island & Dardanelles has been abandoned and now has no assets, with the result that the bonds have no value.

ERIE.—*Trustees of the Nypano Ratified.*—The Interstate Commerce Commission, Division 4, has ratified the appointments of Charles E. Denney and John A. Hadden as trustees of the Nypano in its reorganization proceedings under Section 77 of the Bankruptcy Act.

LOUISIANA & NORTH WEST.—*Plan of Reorganization.*—Federal Judge H. W. Goddard of New York has passed the plan of reorganization for this road back to the Interstate Commerce Commission, indicating his disapproval of its provisions. The commission originally approved the plan in October, 1937.

NEW YORK, NEW HAVEN & HARTFORD.—*Equipment Trust Certificates.*—The Interstate Commerce Commission, Division 4, has authorized the trustees to assume liability for $1,640,000 of four per cent equipment trust certificates, maturing in 10 equal annual installments of $164,000 on August 1 of each year from 1939 to 1948. The issue has been sold at 100.14 to Evans, Stillman & Co., making the average annual interest cost to the trustees approximately 3.97 per cent.

PENNSYLVANIA.—*Abandonments by Baltimore & Eastern.*—The Baltimore & Eastern has applied to the Interstate Commerce Commission for authority to abandon various segments of its line, aggregating 20.23, all in Maryland. The segments are: Centreville branch from Centreville Junction to Centreville, 5.37 miles; Claiborne branch from McDaniel to Claiborne, 1.93 miles; main line from a point near Easton Junction to a point near Preston, 9.62 miles; also, from a point 4,356 ft. east of Vienna Station to a point near Mardela Springs Station, 2.95 miles, and from a point on the west side of Sinepuxent bay to the eastern terminus in Ocean City, 0.36 miles.

PENNSYLVANIA. — *Abandonment.* — The Interstate Commerce Commission, Division 4, has authorized this company to abandon parts of certain branch lines of railroad as follows: (1) Of the Clover creek branch, extending from valuation station 32 plus 00 to its terminus at valuation station 146 plus 68, approximately 2.2 miles, all in Blair County, Pa.; (2) of the Moshannon and Clearfield branch, extending from valuation station 422 plus 00 to its terminus at valuation station 464 plus 40, approximately 0.8 mile, all in Clearfield County, Pa.; and (3) of the Schenley branch, extending from valuation station 198 plus 00 to its terminus at valuation station 231 plus 44, approximately 0.6 mile, all in Armstrong County, Pa., a total of 3.6 miles.

PITTSBURGH & WEST VIRGINIA.—*Securities.*—The Interstate Commerce Commission, Division 4, has authorized this company to pledge and repledge from time to time to and including June 30, 1940, as collateral security for outstanding notes or for notes issued in renewal or in substitution (1) $3,576,000 of first mortgage gold bonds and $8,047,000 of general mortgage six per cent gold bonds and (2) the company's equity in these bonds. The commission has also authorized this company to issue, reissue, extend or renew at par a promissory note or notes in the amount of $250,000.

ST. LOUIS-SAN FRANCISCO. — *Interest Payment.*—Holders of general mortgage 4 per cent and income 5 per cent bonds of the Kansas City, Memphis & Birmingham have been notified by the trustees of the St. Louis-San Francisco that interest will be paid on these bonds on September 1 at the rate of $10 on each $500 4 per cent bond and $12.50 on each $500 5 per cent bond, pursuant to a court order.

ST. LOUIS SOUTHWESTERN. — *Interest Payment.*—United States District Judge John C. Collet, on August 10, signed an order allowing an appeal from an order entered by Judge Charles B. Davis on July 16 authorizing Berryman Henwood, trustee of the St. Louis Southwestern to pay $400,000 in interest due May 1, 1938 on Cotton Belt first mortgage certificates, and from an order entered by Judge George H. Moore on July 22 directing the trustees to pay the interest to the Central Hanover Bank and Trust Company, mortgage trustee. The appeal is to be taken by the Guaranty Trust Company of New York, trustee under the First Terminal and Unifying Mortgage, and by the protective committee for holders of bonds of that issue. A petition for allowance of appeal to the Circuit Court of Appeals at St. Paul will be made on September 6. When the trustee on July 1 presented his

Continued on next left-hand page

MODERN POWER
increases net returns

Railroads manufacture "transportation". Locomotives are the production machines.

Ton-miles per hour is the measure of their efficiency. How can this be increased?

Only by a combination of high boiler pressure, high superheat, generous boiler proportions, large grates, proper steam distribution, light reciprocating and rotating weights.

This combination can only be obtained in *new locomotives*.

LIMA LOCOMOTIVE WORKS INCORPORATED

LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO

petition for authority to pay the interest, the protective committee and the Guaranty Trust Company filed answers challenging the validity of the first mortgage. In directing payment of the interest Judge Davis at that time ruled that all legal issues respecting the mortgage had been settled by an order entered in 1936. Previously the trustee had requested authority to withhold payment on May 1 because of a lack of cash. On July 22 Judge Moore directed that the trustee pay the interest to the mortgage trustee rather than to the Guaranty Trust Company, which is paying agent for this mortgage as well as trustee under the First Terminal and Unifying Mortgage.

SEABOARD AIR LINE.—*Equipment Trust Certificates.*—The Interstate Commerce Commission, Division 4, has authorized the receivers to assume liability for $1,508,000 of class A equipment trust four per cent certificates, maturing as follows: $16,000 on the first day of each month beginning January 1, 1939, to and including August 1, 1944, and $15,000 on the first day of each month thereafter to and including December 1, 1946. The issue has been sold to the Prudential Insurance Company of America at par and accrued dividends. The commission has deferred action on that part of the receivers' application requesting authority to assume liability for $163,500 of class B equipment trust four per cent certificates, maturing February 1, 1947.

SPOKANE INTERNATIONAL.—*Reorganization.*—Petitions for rehearing and modifications of the reorganization plan promulgated by the Interstate Commerce Commission on June 17 have been filed by Frederic H. Ecker, Alfred H. Meyers and Hubert F. Young, a committee representing holders of the road's first mortgage bonds, and by the Irving Trust Company as successor trustee under the mortgage and supplemental mortgage, dated July 1, 1905, and February 16, 1910, respectively. The plan—the first approved by the commission for a Class I road since section 77 became part of the Bankruptcy Act—was reviewed in the *Railway Age* of June 25, page 1046.

WABASH.—*Reorganization.*—Interstate Commerce Commission hearings in this proceeding, heretofore scheduled for September 7, have been postponed until November 15. The sessions will be held at Washington, D. C., before Examiners A. C. Devoe and G. M. Eddy.

Dividends Declared

Alabama & Vicksburg.—Capital, 3 Per Cent, semi-annually, payable October 1 to holders of record September 8.

Vicksburg, Shreveport & Pacific.—Preferred, 2½ Per Cent, semi-annually; Common, 2½ Per Cent, semi-annually, both payable October 1 to holders of record September 8.

Average Prices of Stocks and Bonds

	Aug. 16	Last week	Last year
Average price of 20 representative railway stocks..	28.00	29.70	51.33
Average price of 20 representative railway bonds..	59.88	60.90*	79.60

* Corrected.

Railway Officers

EXECUTIVE

Frank Simpson, chief clerk in the office of the chief of transportation of the Canadian National, has been appointed assistant to the vice-president of operation, with headquarters at Montreal, Que. Mr. Simpson has had a varied experience in construction and operating work during the expansion period of the railroads in Western Canada, having been active in the construction of the Grand Trunk Pacific from Winnipeg, Man., to Prince Rupert, B. C. He also served in connection with the Grand Trunk Pacific valuation work at the time of the arbitration proceedings prior to incorporation into the C. N. R. in 1923.

Mr. Simpson was born in Aberdeen, Scotland, on November 27, 1890. He received his education at Dunfermline high

Frank Simpson

school and began his railway career with the North British Railway in 1906. He moved to Canada in 1911 and that year entered the service of the Grand Trunk Pacific as stenographer in the engineering department. The following year he became secretary to the chief engineer, serving in that position until 1920, when he was appointed chief clerk in the valuation department. A few months later he became secretary to the general manager of the Western region of the Canadian National and some years later he was appointed chief clerk to the general superintendent of transportation at Winnipeg. In 1930 Mr. Simpson was transferred to the office of the vice-president of operation and construction at Montreal, later serving in the office of the president. He was transferred to the office of the chief of transportation as chief clerk in 1936, the position he held at the time of his recent promotion.

FINANCIAL, LEGAL AND ACCOUNTING

G. H. Renwick, auditor of Canadian National Telegraphs, with headquarters at Toronto, Ont., has been appointed assistant regional auditor at that point. He will be replaced by **J. P. Hudson.**

Maurice J. Lynch has been appointed comptroller of the Northern Pacific Terminal company of Oregon, with headquarters at Portland, Ore., succeeding **Charles B. Shibell,** who retired on August 1, after 34 years of railroad service. Mr. Lynch was born in Pittsburgh, Pa., on May 29, 1895. He attended Tilford Academy and New York University and entered the service of the Great Northern as a clerk in 1916, where he remained for one year. In 1917 he entered the service of the Southern Pacific as special accountant, serving that road continuously until his recent appointment, with the exception of two years spent overseas during the World War. Mr. Shibell began his railroad career in 1904, serving until 1915 in various clerical positions for the Southern Pacific and the Union Pacific. On the latter date he was appointed assistant comptroller of the Northern Pacific Terminal Company and in 1924 he was promoted to comptroller, the position he held at the time of his retirement.

George B. Herbert, who has been promoted to secretary and auditor of the Southern Pacific lines in Texas and Louisiana to succeed **George R. Cottingham,** retired, as reported in the *Railway Age* of August 6, began his railroad career on August 1, 1901, as a messenger boy in the shops of the Southern Pacific at Algiers, La. He was later made an office assistant, and in 1902 transferred to the accounting department of the Louisiana Lines at New Orleans. Later in 1902 he was assigned to statistical work in the freight accounting department at Houston, and two years later was placed in the general accounting department in charge of general accounts. In 1914 Mr. Herbert was appointed freight claim agent for the Southern Pacific Lines and in 1916 he was made assistant auditor of the Lines in Texas and Louisiana. On March 1, 1917, he was promoted to auditor of the Louisiana lines at New Orleans and at the same time was made secretary and a director of the Southern Pacific in that state. During the period of federal control he served as secretary, director and corporate auditor of the Southern Pacific Lines in Texas and Louisiana. Following the return of the railroads to private ownership he was again made auditor of the Southern Pacific Lines in Louisiana. In 1927 he was appointed assistant auditor of the lines in Texas and Louisiana at the general offices in Houston, which position he has held until his recent promotion.

Mr. Cottingham was born on July 31, 1868, at St. Marys, Tex., and was educated at Texas A. & M. College. He entered the employ of the Southern Pacific in 1888 as an operator and agent at Port Lavaca, on what was then the Gulf Western Texas & Pacific, and is now a part of the Southern Pacific Lines. In 1892 he was made a clerk in the auditor's office at Houston and two years later was appointed general bookkeeper in the same department. In 1896 he was promoted to auditor of the New York, Texas & Mexican and the Gulf, West Texas & Pacific, both corporate properties of the Southern

Continued on next left-hand page

A LOCOMOTIVE ENGINEER'S VIEW OF THE BOOSTER

Detroit Mich 6-6-38
TOP OF HILL
Franklin Railway Supply Co.
Gentlemen - Please send me pamphlet on "BOOSTER" by Franklin Supply Co" = many of our engines have them = I have no literature on them, we have single as well as the double Trailer type = Am an Engr on T. M RR - Sincerely Edw J Aufenbrandt = 3965 West
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Edw J Aufenbrandt
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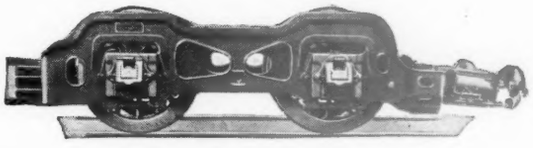
The Franklin Railway Supply Co
No 17 East 42nd St
60 East 42
New York

Many compliments for The Locomotive Booster come from the operators who depend on it for help. This artistic engineer shows there is no limit of grade for The Booster and in his opinion, only a cow would question that.



No locomotive device is better than the replacement part used for maintenance. Genuine Franklin repair parts assure accuracy of fit and reliability of performance.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO MONTREAL

Pacific with headquarters at Victoria. In 1902 he was made chief clerk in the freight accounting department of the Galveston, Harrisburg & San Antonio and the Texas & New Orleans at Houston. A year later he was advanced to freight auditor, assistant auditor and then auditor for those properties. When the federal government took over operation of the railroads in 1918, he was appointed federal auditor for the Southern Pacific Lines in Texas and Louisiana, the San Antonio & Aransas Pass, the San Antonio, Uvalde & Gulf and the Trinity & Brazos Valley. In 1920 he was appointed secretary and auditor on the Southern Pacific Lines in Texas and Louisiana, and at the same time was made secretary of the Southern Pacific Terminal Company, which position he held until his retirement.

J. F. Aitchison, regional auditor of the Canadian National, with headquarters at Toronto, Ont., has been appointed general auditor, with headquarters at Montreal, Que. He will be succeeded by **Thomas H. Ewing,** at present auditor of capital

J. F. Aitchison

expenditures at Toronto. Mr. Aitchison was born in 1880. He began railroad service as a sectionman for the Grand Trunk at St. Thomas, Ont., in 1897. In 1900 he became a clerk and six years later he resigned from the railway. He returned in 1914 as traveling accountant and in 1917 became special auditor. From October, 1918, to May, 1919, Mr. Aitchison was acting auditor of disbursements and on the latter date he became auditor of disbursements. He was appointed assistant comptroller at Toronto in 1923, and in 1930 became regional auditor.

Mr. Ewing was born in Halifax, England, in 1882. He came to Canada in 1902 and after several years with the Canadian Pacific and the Dominion Car & Foundry Co., he joined the Grand Trunk in 1909 as clerk in the office of the auditor of disbursements. He later served as traveling accountant, clerk in charge of the compilation of annual reports and statistics and special auditor. In 1923 he was appointed auditor of capital expenditures, the position he held at the time of his recent promotion.

OPERATING

G. B. Schroyer, trainmaster-special duty, on the Pennsylvania, Western region, has been appointed assistant trainmaster and division operator on the Chicago Terminal division, succeeding **C. F. Silverthorn,** who has been assigned to other duties at Philadelphia, Pa., and **A. L. Hunt,** assistant trainmaster of the Fort Wayne division, has been appointed assistant trainmaster and division operator of the Grand Rapids division with headquarters at Grand Rapids, Mich. **V. W. Burba,** assistant trainmaster-supervising agent-division operator, of the Grand Rapids division has been appointed supervising agent of that division and freight agent at Grand Rapids.

James R. Tucker, who has been promoted to general manager of the Missouri & Arkansas with headquarters at Harrison, Ark., as reported in the *Railway Age* of July 30, was born on September 13, 1889, at Carrollton, Mo. He entered railway service on December 3, 1909, with the Chicago, Burlington & Quincy as a clerk in the store department at Brookfield, Mo. In February, 1911, he was appointed accountant and storekeeper of the Kansas City Southern at Pittsburg, Kan. He resigned from this position in December, 1917, to enter the employ of the Missouri & Arkansas at Harrison, Ark., and since has occupied the positions of storekeeper, purchasing agent, assistant traffic manager, assistant to the president, assistant to the receiver, and assistant to the general manager.

TRAFFIC

W. C. Giese, has been appointed general agent of the Minneapolis, St. Paul & Sault Ste. Marie at Milwaukee, Wis., to succeed **J. A. Millington,** retired.

Frank C. Keen, Jr., and **R. G. Parks** have been appointed general agents for the Atlanta, Birmingham & Coast, with headquarters at Miami, Fla., and Jacksonville, Fla., respectively.

B. E. Smeed, general agent on the Minneapolis, St. Paul & Sault Ste. Marie with headquarters at New York, has been promoted to assistant general freight agent at that point, a newly created position, and **A. J. O'Malley,** contracting freight agent at Chicago has been promoted to general agent at New York, succeeding Mr. Smeed.

Alby G. Anderson, agricultural agent of the St. Louis-San Francisco, with headquarters at Atmore, Ala., has been appointed general livestock and dairy agent with headquarters at Springfield, Mo., to succeed **Paul Potter. W. L. O'Toole,** terminal inspector at E. St. Louis, Ill., has been appointed assistant general agent with headquarters at New Orleans, La.

J. L. Smith, division passenger agent of the Delaware, Lackawanna & Western, with headquarters at Binghamton, N. Y., has asked to be relieved of the detailed duties of that position. In order, however, that the company may continue to have the benefit of Mr. Smith's wide experience, he has been appointed special passenger agent, with the same headquarters, effective September 1. **W. E. Downs,** ticket agent at Binghamton has been promoted to division passenger agent at that point, to succeed Mr. Smith.

R. D. Taylor, assistant general baggage agent on the Atchison, Topeka & Santa Fe at Los Angeles, Cal., has been promoted to general baggage, express and mail agent at that point, succeeding **W. N. Irwin,** who has retired, and **James J. McNulty** has been appointed assistant general baggage, express and mail agent at Los Angeles.

C. J. Dinkelkamp, in the general office of the St. Louis Southwestern at St. Louis, Mo., is promoted effective September 1, to general agent at that point succeeding **J. H. Arnold,** who has been appointed assistant general freight and passenger agent at Little Rock, Ark., replacing **F. E. Rownd,** who in turn has been appointed general agent at Kansas City, Mo. **W. C. Huxhold,** assistant general agent at Chicago has been promoted to general agent at Denver, Colo., relieving **F. I. Smith,** who will retire September 1, and **C. F. Hall,** commercial agent at Chicago, will succeed Mr. Huxhold.

ENGINEERING AND SIGNALING

A. C. Bradley, assistant superintendent on the Chicago, Rock Island & Pacific, with headquarters at Minneapolis, Minn., has been appointed division engineer including the duties of master carpenter, of the Southern division, with headquarters at Fort Worth, Tex., succeeding **H. G. Dennis** who has been assigned to other duties.

PURCHASES AND STORES

H. C. Young, assistant purchasing agent of the Delaware & Hudson, with headquarters at Albany, N. Y., has been appointed acting purchasing agent, with the same headquarters, replacing **H. K. T. Sherwood,** resigned.

SPECIAL

James D. Roosa, chief of police of the New York Central Lines East, has been appointed assistant superintendent of property protection for the New York Central System, with headquarters at New York City, and **LeGrand G. Wagar** has been appointed to succeed him, with headquarters at New York City.

OBITUARY

Edward T. Miller, former vice-president and general counsel of the St. Louis-San Francisco, with headquarters at St. Louis, Mo., died August 11 at Asheville, N. C., of a heart attack.

Woodward Hudson, vice-president and general counsel of the Boston & Maine between 1916 and 1925, except during the

NO. 66 OF A SERIES OF FAMOUS ARCHES OF THE WORLD

MONSAL DALE VIADUCT
ENGLAND

Crossing the River Wye, in one of the most beautiful parts of Derbyshire, is the Monsal Dale Viaduct of the London, Midland & Scottish Railway, England. This viaduct, situated on the main-line between Derby and Manchester, was built in 1862 and was extensively repaired in 1907-1908. The 360 ft. structure, with a maximum height of 66 ft. above water, consists of five semi-circular brick arches each of 50 ft. span, with masonry abutments and masonry piers and parapet.

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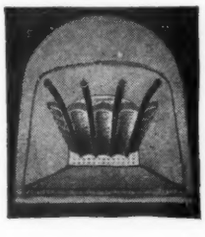
While the fundamental design of the Security Sectional Arch remains the same, it has been continuously developed with the progress in locomotive design and is today an essential factor in economical operation of modern steam power.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



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Locomotive Combustion Specialists

period of federal control, when he held the presidency of the road, died at his home in Concord, Mass., on August 17, at the age of 80. Born in 1858, he was graduated from Harvard University with the degree of LL.B. in 1882 and entered railway service on October 1, 1887, in the law department of the Boston & Albany as assistant to the counsel. In 1904 he became attorney for the New York Central and counsel for its leased road, the Boston & Albany, with headquarters at Boston, Mass., and on January 1, 1916, became vice-president and general counsel for the Boston & Maine which position he held until his retirement in 1925.

Joseph J. Rhoads, who retired on May 1 as assistant to general superintendent of the Northern division of the Pennsylvania, with headquarters at Oil City, Pa., died at his home on August 11. He was in his 70th year.

J. Bertram Young, engineer of tests, Reading, with headquarters at Reading, Pa., died on July 29. He first went with the road in 1898 as assistant chemist, was advanced to the position of chemist in 1906 and became engineer of tests in 1920.

Martin J. Larson, special representative of the operating department of the Chicago, Milwaukee, St. Paul & Pacific at Chicago, and formerly superintendent at Austin, Minn., and at Sioux City, Iowa, died of a heart attack at his home in Chicago, August 11.

Charles Newell Burch, general solicitor of the Illinois Central's Southern lines at Memphis, Tenn., and at one time general counsel of the Louisville & Nashville, died at Memphis, August 10. Judge Burch was born at Nashville, Tenn., on December 27, 1868, and graduated from Vanderbilt University in 1888. He began practicing law at Nashville in 1890, becoming assistant United States district attorney at that point in 1896. He entered railway service in 1898 as assistant district attorney for the L. & N. and the following year he was appointed district attorney

Charles Newell Burch

for Tennessee. In 1901 he was promoted to general solicitor and in 1903 he was advanced to general counsel. In 1905 Judge Burch accepted the position of general solicitor for the Yazoo & Mississippi Valley and district attorney for Tennessee of the Illinois Central at Memphis, and in 1928 he was appointed general solicitor for the Illinois Central's Southern lines, the position he held at the time of his death.

Joseph M. Bryson, general counsel of the Missouri-Kansas-Texas, with headquarters at St. Louis, Mo., who died on August 8 after an illness of several months, as reported in the *Railway Age* of August 13, was born on March 26, 1867, at Pittsburgh, Pa., and studied law in the offices of Warner, Dean & Hagerman at Kansas City, Mo., after which he was admitted to the bar in 1889. He entered the employ of the Missouri-Kansas-Texas as a law clerk in 1889, and served in that capacity while the railroad's general offices were at Sedalia, Mo., and Parsons, Kan. He was appointed attorney at St. Louis in July, 1889, and four years later was promoted to general solicitor. In 1897 he was

Joseph M. Bryson

promoted to assistant general counsel, and in 1912 to general counsel, the position he was holding at the time of his death.

Frank A. Hogberg, land and tax commissioner of the Illinois Central, with headquarters at Chicago, died at his home on August 13. Mr. Hogberg was born in Chicago on January 12, 1871, and entered the service of the Illinois Central on October 1, 1888, as a messenger in the office of the vice-president in charge of accounting. He was later transferred to the office of the auditor of freight receipts, and subsequently served as way bill clerk, tonnage clerk and abstract clerk. In July, 1900, he was promoted to chief clerk of the tax department, and on June 16, 1927, he was advanced to assistant to the land and tax commissioner. Mr. Hogberg was promoted to land and tax commissioner on January 1, 1929, and held that position until the time of his death.

Harry Guy Taylor, commissioner of Western Railroads and chairman of the Western Association of Railway Executives, Chicago, who died on August 10 of heart trouble from which he had been suffering for several months, as reported in the *Railway Age* of August 13, was born at Wilber, Neb., on June 30, 1880. He attended Wesleyan University at Sa-

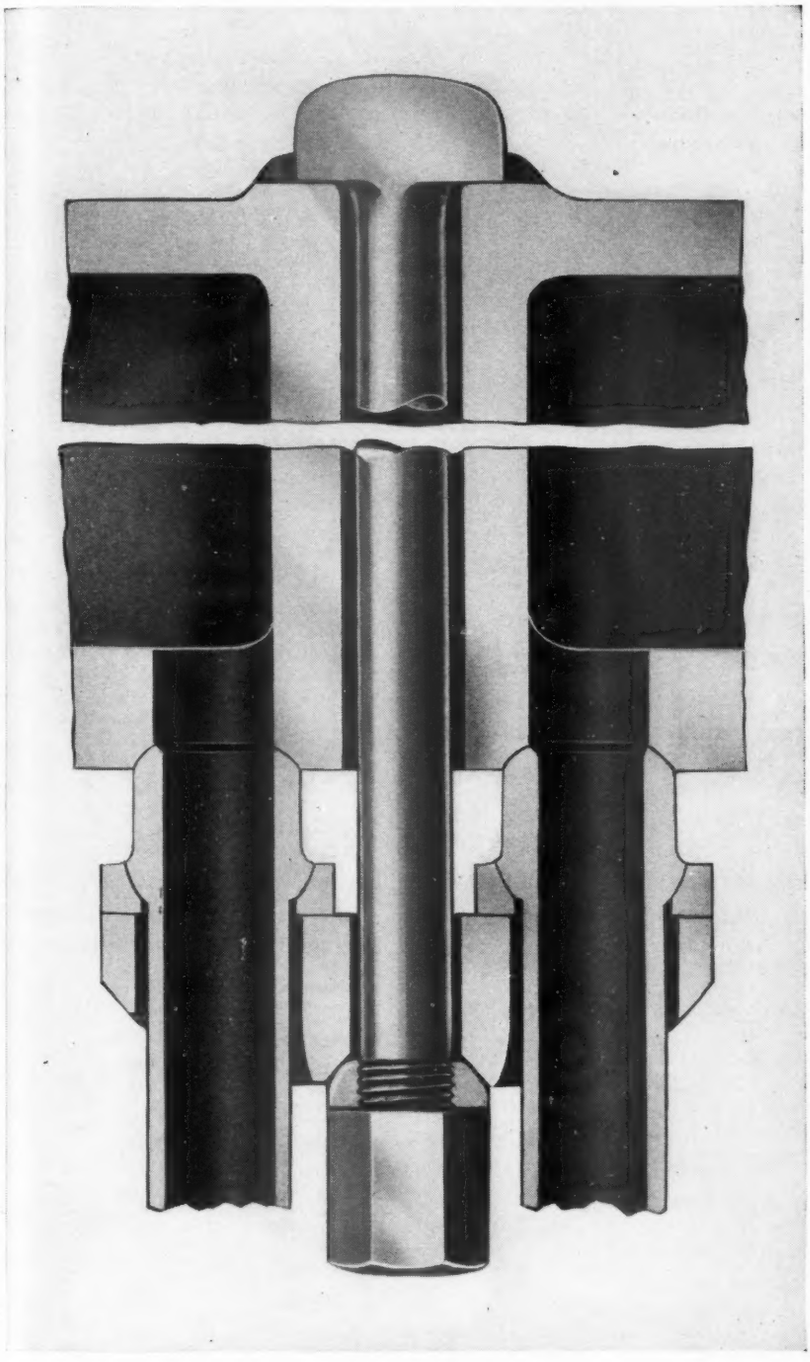
Harry Guy Taylor

lina, Kan., and York College at York, Neb., and when he was compelled to leave college because of sickness, became the publisher of the Norton County Plaindealer at Almena, Kan. Later he purchased a weekly paper at Central City, Neb., which he published for ten years. During the last year of his work as a publisher he was president of the Nebraska State Press Association. Mr. Taylor was a member of the legislature of Nebraska in 1911, and in 1912 was elected to the Nebraska State Railway Commission, where he served for almost fifteen years. In 1924, Mr. Taylor was president of the National Association of Railway and Public Utilities Commissioners. During the last four years of his service on the Nebraska Commission, he also served as chairman of the Central Western Shippers' Advisory Board. In 1927 he resigned as State Commissioner to accept the position of manager of public relations of the American Railway Association with headquarters at Washington, D. C. He served in this capacity until December, 1932, when he was appointed commissioner of Western Railroads and chairman of the Western Association of Railway Executives. Upon the passage of the Emergency Transportation Act of 1933, he was appointed executive secretary of the Regional Coordinating Committee of the Western Railway Group.

As commissioner of Western Lines and chairman of the Committee on the Elimination of Preventable Waste he was instrumental in bringing about many savings for the Western Lines. One of his outstanding accomplishments was the curtailment of unnecessary train mileage among competing lines. It was through his efforts that a rule was adopted by the Western Lines which provided that each railroad must give its competitor adequate notice of the speeding up of a train schedule, the inauguration of a new train or the adoption of added features which would react to the disadvantage of weaker competitors. Another problem which he helped to solve was the curtailment of free transportation.

Table of Revenues and Expenses appears on next left-hand page

The ADVANTAGES of the *Detachable* Superheater Unit Joint



They effect a considerable economy in time in the application and removal of Superheater units.

The maintenance of the joint is easy of accomplishment, and with genuine Elesco bolt and nut correctly tightened, there is no possibility of the joint leaking.

This type of joint is standard the world over, wherever superheaters are to be found in locomotive or stationary practice. It is the result of years of experimenting with every conceivable kind of joint. All other kinds of joints involve added expense in rehabilitating the unit before replacing it in the boiler.

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Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 137 Monthly Reports of Revenues and Expenses Representing 141 Class I Steam Railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF JUNE, 1938 AND 1937

Item	United States		Eastern District		Southern District		Western District	
	1938	1937	1938	1937	1938	1937	1938	1937
Miles of road operated at close of month	234,626	235,501	57,996	58,224	44,729	44,780	131,901	132,497
Revenues:								
Freight	$222,717,598	$281,845,124	$87,608,181	$119,059,317	$43,376,427	$52,331,268	$91,732,990	$110,454,539
Passenger	34,988,193	38,509,689	18,762,770	20,980,675	3,724,930	4,492,710	12,500,493	13,036,304
Mail	7,617,835	7,869,897	2,890,530	2,985,502	1,309,028	1,388,715	3,418,277	3,495,680
Express	3,877,072	6,567,009	1,386,435	2,881,798	527,731	1,054,787	1,962,906	2,630,424
All other operating revenues	12,939,096	16,859,504	6,241,318	8,553,493	1,485,125	1,863,333	5,212,653	6,442,678
Railway operating revenues	282,139,794	351,651,223	116,889,234	154,460,785	50,423,241	61,130,813	114,827,319	136,059,625
Expenses:								
Maintenance of way and structures	36,029,050	48,527,374	12,395,171	18,350,108	6,376,725	7,386,762	17,257,154	22,790,504
Maintenance of equipment	52,841,566	72,430,105	21,795,916	33,199,460	10,271,944	12,910,274	20,773,706	26,320,371
Traffic	8,610,339	8,812,624	3,165,815	3,195,508	1,531,856	1,603,844	3,912,668	4,013,272
Transportation—Rail line	107,025,148	121,188,842	46,685,527	54,834,509	17,774,407	19,450,128	42,565,214	46,904,205
Transportation—Water line	386,442	453,810	.....	.....	.....	.....	386,442	453,810
Miscellaneous operations	3,121,072	3,436,903	1,345,406	1,508,196	291,182	345,769	1,484,484	1,582,938
General	10,564,528	11,305,020	4,191,069	4,583,686	2,025,022	2,196,199	4,348,437	4,525,135
Transportation for investment—Cr.	385,792	632,884	100,901	73,874	56,916	106,659	227,975	452,351
Railway operating expenses	218,192,353	265,521,794	89,478,003	115,597,593	38,214,220	43,786,317	90,500,130	106,137,884
Net revenue from railway operations	63,947,441	86,129,429	27,411,231	38,863,192	12,209,021	17,344,496	24,327,189	29,921,741
Railway tax accruals	28,360,594	16,103,881	12,410,501	13,610,280	5,279,227	3,799,623	10,670,866	† 1,306,022
Railway operating income	35,586,847	70,025,548	15,000,730	25,252,912	6,929,794	13,544,873	13,656,323	31,227,763
Equipment rents—Dr. balance	7,587,992	7,873,072	3,233,524	3,440,925	439,124	413,920	3,915,344	4,018,227
Joint facility rent — Dr. balance	2,998,052	2,798,159	1,559,599	1,466,742	395,072	364,079	1,043,381	967,338
Net railway operating income	25,000,803	59,354,317	10,207,607	20,345,245	6,095,598	12,766,874	8,697,598	26,242,198
Ratio of expenses to revenues (per cent)	77.3	75.5	76.5	74.8	75.8	71.6	78.8	78.0
Depreciation included in operating expenses	16,867,779	16,310,874	7,369,867	7,244,230	3,295,813	3,128,350	6,202,099	5,938,294
Pay roll taxes	7,888,788	† 6,816,536	3,324,482	3,882,930	1,406,571	† 1,256,575	3,157,735	† 9,442,891
All other taxes	20,471,806	22,920,417	9,086,019	9,727,350	3,872,656	5,056,198	7,513,131	8,136,869

FOR SIX MONTHS ENDED WITH JUNE, 1938 AND 1937

Miles of road operated at close of month*	234,781	235,691	58,021	58,304	44,720	44,793	132,040	132,594
Revenues:								
Freight	$1,295,820,197	$1,704,817,153	$517,299,183	$744,221,165	$269,471,022	$334,499,670	$509,049,992	$626,096,318
Passenger	197,505,968	211,689,588	107,730,425	115,737,892	29,234,219	32,073,821	60,541,324	63,877,875
Mail	46,590,427	47,854,589	17,777,269	18,292,872	8,176,156	8,466,104	20,637,002	21,095,613
Express	22,755,829	30,730,738	7,737,149	12,339,971	5,106,301	7,003,002	9,912,379	11,387,765
All other operating revenues	73,736,073	91,781,015	36,537,008	46,712,377	9,979,884	12,041,234	27,219,181	33,027,404
Railway operating revenues	1,636,408,494	2,086,873,083	687,081,034	937,304,277	321,967,582	394,083,831	627,359,878	755,484,975
Expenses:								
Maintenance of way and structures	195,616,247	242,115,238	71,868,713	95,603,262	38,087,229	43,350,324	85,660,305	103,161,652
Maintenance of equipment	331,749,388	420,689,101	137,306,603	193,749,004	64,400,374	74,681,634	130,042,411	152,258,463
Traffic	51,659,424	52,164,727	18,721,670	19,172,612	9,863,168	9,948,847	23,074,586	23,043,268
Transportation—Rail line	668,546,099	744,195,888	294,778,798	338,256,331	115,016,272	123,810,358	258,751,029	282,129,199
Transportation—Water line	2,406,877	2,878,666	.....	.....	.....	.....	2,406,877	2,878,666
Miscellaneous operations	18,651,678	19,766,928	8,315,796	8,871,294	2,540,431	2,767,561	7,795,451	8,128,073
General	64,772,397	78,886,755	25,699,504	34,025,471	12,361,292	13,922,357	26,711,601	30,938,927
Transportation for investment—Cr.	1,439,781	2,127,530	281,716	301,846	244,553	332,265	913,512	1,493,419
Railway operating expenses	1,331,962,329	1,558,569,773	556,409,368	689,376,128	242,024,213	268,148,816	533,528,748	601,044,829
Net revenue from railway operations	304,446,165	528,303,310	130,671,666	247,928,149	79,943,369	125,935,015	93,831,130	154,440,146
Railway tax accruals	169,662,302	163,997,274	72,380,597	75,013,552	33,341,658	36,806,295	63,940,047	52,177,427
Railway operating income	134,783,863	364,306,036	58,291,069	172,914,597	46,601,711	89,128,720	29,891,083	102,262,719
Equipment rents—Dr. balance	46,688,873	46,590,943	19,380,146	20,201,979	4,736,130	3,642,440	22,572,597	22,746,524
Joint facility rent — Dr. balance	17,805,685	18,248,789	9,466,463	10,158,492	2,051,084	1,884,460	6,288,138	6,205,837
Net railway operating income	70,289,305	299,466,304	29,444,460	142,554,126	39,814,497	83,601,820	1,030,348	73,310,358
Ratio of expenses to revenues (per cent)	81.4	74.7	81.0	73.5	75.2	68.0	85.0	79.6
Depreciation included in operating expenses	100,931,629	97,506,981	44,022,508	43,191,971	19,708,800	18,742,810	37,200,321	35,572,200
Pay roll taxes	47,663,035	30,943,547	20,466,225	19,621,082	8,780,066	5,494,208	18,416,744	5,828,257
All other taxes	121,999,267	133,053,727	51,914,372	55,392,470	24,561,592	31,312,087	45,523,303	46,349,170

* Represents an average of the mileage reported at the close of each month within the period.

† Deficit or other reverse items.

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

Table of Freight Operating Statistics appears on next left-hand page

REDUCE Maintenance Costs of Many Components

THERE is a mighty important reason why the vital wearing parts on your locomotives should be made from HUNT-SPILLER *Air Furnace* GUN IRON.

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HUNT-SPILLER *Air Furnace* GUN IRON

Freight Operating Statistics of Large Steam Railways—Selected Items for the Month of June,

Region, road, and year	Miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (*thousands*)	Car-miles: Per cent loaded	Ton-miles (*thousands*): Gross, excluding locomotives and tenders	Ton-miles (*thousands*): Net, revenue and non-revenue	Number of road locomotives on line: Serviceable: Not stored	Number of road locomotives on line: Serviceable: Stored	Number of road locomotives on line: Unserviceable	Number of road locomotives on line: Per cent unserviceable
New England Region:												
Boston & Albany	1938 374	103,456	107,543	7,133	2,321	65.1	128,796	42,204	48	10	32	35.6
	1937 374	135,378	140,613	9,404	3,068	67.6	169,414	59,454	55	19	17	18.7
Boston & Maine	1938 1,941	229,259	251,980	20,194	7,701	68.9	426,227	155,975	116	5	126	51.0
	1937 1,941	271,130	301,059	23,610	9,463	71.1	505,309	189,254	121	6	131	50.8
N. Y., New Hav. & Hartf.	1938 1,997	291,418	368,238	17,471	9,681	63.4	540,723	188,730	165	24	85	31.7
	1937 2,011	347,079	428,556	25,406	12,124	69.1	635,749	233,809	187	2	80	30.3
Great Lakes Region:												
Delaware & Hudson	1938 830	182,786	235,974	21,120	5,862	62.9	365,350	166,332	88	131	40	15.4
	1937 830	221,919	292,509	32,498	7,645	65.8	467,499	220,568	96	128	35	13.5
Del., Lack. & Western	1938 983	292,429	329,909	47,266	10,096	66.5	598,690	232,868	122	15	84	38.0
	1937 983	369,685	409,047	55,290	12,360	68.2	717,119	284,265	134	17	76	33.5
Erie (incl. Chi. & Erie)	1938 2,276	539,542	576,279	34,381	22,903	64.8	1,413,955	510,816	200	52	217	46.3
	1937 2,277	681,449	724,954	42,110	28,947	66.4	1,744,204	665,248	249	23	194	41.6
Grand Trunk Western	1938 1,027	200,898	202,640	1,434	5,142	61.4	316,149	105,660	61	5	42	38.9
	1937 1,027	264,076	265,099	2,395	7,235	64.9	424,380	149,340	85	..	49	36.6
Lehigh Valley	1938 1,288	267,625	296,377	42,011	10,609	63.6	682,991	286,747	106	2	133	55.2
	1937 1,303	352,330	386,243	47,548	13,052	66.3	817,224	351,053	131	11	130	47.8
New York Central	1938 10,651	2,077,053	2,175,217	119,867	66,118	59.2	4,347,572	1,677,007	701	333	448	30.2
	1937 10,723	2,756,780	2,894,725	174,883	90,786	60.0	5,973,322	2,376,760	956	144	360	24.7
N. Y., Chicago & St. Louis	1938 1,672	413,187	419,234	4,623	14,019	61.1	848,523	287,606	135	30	33	16.7
	1937 1,672	486,391	490,420	5,908	17,045	65.7	1,003,493	373,915	174	3	18	9.2
Pere Marquette	1938 2,081	256,461	264,918	4,925	6,611	60.5	426,498	156,212	91	31	43	26.1
	1937 2,081	351,984	359,576	5,230	9,047	61.2	572,272	208,576	117	6	28	18.5
Pittsburgh & Lake Erie	1938 233	49,795	50,808	.....	2,063	58.2	176,632	96,068	30	7	36	49.3
	1937 234	93,574	96,349	.....	3,563	64.6	298,465	173,292	36	13	26	34.7
Wabash	1938 2,421	491,459	502,604	10,446	14,896	62.8	890,657	290,049	128	22	143	48.8
	1937 2,421	554,790	562,752	11,321	16,773	66.1	956,602	327,932	148	31	114	38.9
Central Eastern Region:												
Baltimore & Ohio	1938 6,314	1,168,220	1,401,409	143,595	34,833	60.6	2,375,109	1,012,830	554	170	535	42.5
	1937 6,351	1,556,988	1,890,015	190,751	47,750	62.6	3,271,962	1,479,130	745	57	484	37.6
Central of New Jersey	1938 678	138,597	157,017	28,207	4,297	58.1	311,943	145,775	73	4	76	49.7
	1937 681	157,102	174,376	34,339	4,902	61.8	329,450	153,289	82	3	67	44.1
Chicago & Eastern Illinois	1938 927	148,278	148,646	2,653	3,396	67.7	200,120	81,373	53	4	50	46.7
	1937 931	177,692	177,818	2,876	4,430	66.7	264,685	105,805	55	1	46	45.1
Elgin, Joliet & Eastern	1938 435	70,835	71,280	476	1,589	59.1	118,024	54,081	48	6	29	34.9
	1937 435	112,612	114,059	1,926	2,812	60.7	218,069	109,734	57	3	22	26.8
Long Island	1938 390	25,688	28,577	15,224	262	49.2	20,761	7,968	28	11	8	17.0
	1937 393	28,293	29,011	15,287	245	50.6	19,054	7,289	29	9	12	24.0
Pennsylvania System	1938 10,021	2,237,429	2,671,806	291,989	83,649	60.5	5,600,639	2,310,328	977	472	935	39.2
	1937 10,027	3,259,540	3,744,627	421,340	115,031	62.7	7,830,329	3,522,876	1,494	262	547	23.8
Reading	1938 1,444	339,622	375,554	44,219	9,371	58.4	698,356	324,004	165	34	146	42.3
	1937 1,445	441,200	486,949	57,260	12,147	62.2	869,759	418,499	206	29	104	30.7
Pocahontas Region:												
Chesapeake & Ohio	1938 3,050	688,419	718,030	29,284	29,370	55.5	2,433,851	1,296,563	321	82	125	23.7
	1937 3,050	821,921	862,973	34,169	36,848	57.2	3,000,013	1,606,914	396	41	111	20.3
Norfolk & Western	1938 2,178	537,710	555,967	24,850	21,201	60.5	1,620,889	816,503	255	79	37	10.0
	1937 2,180	669,825	709,977	35,757	28,322	59.4	2,259,780	1,179,183	271	58	39	10.6
Southern Region:												
Atlantic Coast Line	1938 5,079	525,920	532,945	7,972	11,173	61.5	643,437	210,500	264	37	78	20.6
	1937 5,117	601,254	604,967	8,026	13,084	63.7	715,741	259,495	231	46	95	25.5
Central of Georgia	1938 1,886	249,644	253,386	3,505	5,144	70.5	280,351	100,693	98	..	25	20.3
	1937 1,886	262,433	264,575	3,756	5,610	71.4	303,864	117,999	112	..	17	13.2
Illinois Central (incl. Y. & M. V.)	1938 6,540	1,225,282	1,231,978	22,305	31,744	60.6	2,011,238	768,869	610	27	229	26.4
	1937 6,547	1,534,858	1,554,155	29,684	37,495	64.0	2,299,047	905,514	660	25	174	20.3
Louisville & Nashville	1938 4,929	945,540	1,013,323	23,459	21,671	59.3	1,497,412	679,349	308	43	203	36.6
	1937 4,931	1,159,479	1,252,500	30,034	26,916	60.0	1,881,068	881,572	367	45	151	26.8
Seaboard Air Line	1938 4,305	444,996	453,685	4,220	10,834	64.3	626,151	226,250	207	33	66	21.6
	1937 4,295	489,143	505,042	3,004	11,992	67.4	675,144	259,951	236	10	63	20.4
Southern	1938 6,561	1,072,368	1,086,430	15,397	23,281	65.5	1,329,443	499,239	499	2	242	32.6
	1937 6,596	1,266,106	1,284,698	18,821	27,933	68.0	1,568,085	633,520	478	8	281	36.6
Northwestern Region:												
Chicago & North Western	1938 8,388	731,642	757,892	17,708	20,947	63.7	1,286,481	450,360	300	194	203	29.1
	1937 8,397	907,613	940,155	19,677	24,526	64.8	1,494,233	575,875	384	81	190	29.0
Chicago Great Western	1938 1,450	215,321	216,428	9,677	5,999	63.3	357,565	127,986	57	9	23	25.8
	1937 1,450	251,705	251,814	4,457	7,127	62.9	427,089	152,828	70	2	22	23.4
Chi., Milw., St. P. & Pac.	1938 10,943	1,080,814	1,114,077	41,531	29,196	62.2	1,847,792	717,810	451	110	149	21.0
	1937 11,105	1,278,831	1,373,194	57,815	35,138	62.6	2,216,255	884,102	459	104	107	16.0
Chi., St. P., Minneap. & Om.	1938 1,636	192,483	198,418	8,258	4,377	65.5	268,159	112,178	92	29	20	14.2
	1937 1,636	213,567	219,909	9,426	4,847	66.4	295,334	119,652	103	22	22	15.0
Great Northern	1938 7,976	583,849	571,047	18,168	18,227	65.3	1,208,812	522,394	275	88	175	32.5
	1937 7,997	805,191	802,950	30,051	28,907	59.9	2,083,668	995,518	324	54	175	31.6
Minneap., St. P. & S. St. M.	1938 4,273	335,903	339,385	1,890	6,626	66.0	384,254	148,594	103	..	41	28.5
	1937 4,278	377,158	386,124	4,571	8,776	68.7	511,529	217,069	123	..	29	19.1
Northern Pacific	1938 6,423	566,585	588,722	29,996	17,831	69.0	1,071,647	421,811	301	60	90	20.0
	1937 6,429	681,402	722,421	39,036	21,427	66.7	1,306,461	539,845	402	5	67	14.1
Central Western Region:												
Alton	1938 912	185,715	197,550	959	3,869	58.7	253,720	90,928	50	18	29	29.9
	1937 912	212,966	228,447	1,582	4,712	60.5	297,964	110,091	75	..	23	23.5
Atch., Top. & S. Fe (incl. G.C. & S.F. & P. & S.F.)	1938 13,512	1,849,220	2,011,119	95,851	51,563	58.4	3,451,877	1,071,594	601	30	318	33.5
	1937 13,562	2,154,270	2,347,865	114,193	60,739	58.6	4,038,389	1,285,827	655	11	282	29.7
Chicago, Burl. & Quincy	1938 8,893	968,277	990,628	30,513	26,670	64.1	1,627,147	632,915	383	81	90	16.2
	1937 8,934	1,135,737	1,174,323	41,695	31,662	65.9	1,827,199	766,790	443	11	84	15.6
Chi., Rock I. & Pac. (incl. Chi., Rock I. & Gulf)	1938 7,954	1,125,815	1,138,265	7,040	26,109	58.9	1,688,375	592,810	376	29	201	33.2
	1937 8,113	1,269,931	1,290,433	9,137	29,324	61.2	1,840,769	681,892	428	7	187	30.1
Denver & Rio Gr. Western	1938 2,570	207,938	227,524	21,561	5,742	68.6	346,873	145,857	130	34	36	17.7
	1937 2,576	290,288	317,991	33,793	7,419	71.2	457,125	206,082	160	9	33	16.3
Southern Pac.—Pac. Lines	1938 8,567	1,326,573	1,441,150	155,784	43,071	61.0	2,780,242	895,347	551	43	166	21.8
	1937 8,607	1,677,680	1,846,575	234,261	53,955	61.5	3,433,109	1,117,626	645	5	150	18.8
Union Pacific	1938 9,909	1,330,919	1,374,881	72,093	42,398	66.1	2,566,672	909,475	498	153	218	25.1
	1937 9,911	1,617,486	1,679,791	97,670	52,556	67.8	3,117,999	1,159,794	575	79	197	23.1
Southwestern Region:												
Mo.-Kansas-Texas Lines	1938 3,282	361,792	367,893	5,664	9,138	60.2	568,749	202,834	98	1	107	51.9
	1937 3,282	442,743	450,099	6,211	11,934	62.0	736,904	268,744	126	2	72	36.0
Missouri Pacific	1938 7,147	965,743	991,977	21,284	26,655	63.3	1,678,824	635,482	383	83	88	15.9
	1937 7,143	1,131,988	1,168,060	25,013	31,730	63.4	1,947,633	745,250	364	93	82	15.2
St. Louis-San Francisco	1938 4,847	687,655	695,455	9,953	13,737	61.9	873,164	346,752	243	69	79	20.2
	1937 4,888	820,799	833,995	11,485	16,771	60.1	1,077,268	423,726	283	40	82	20.2
St. Louis Southw. Lines	1938 1,690	261,630	265,670	3,483	6,904	58.9	426,191	137,208	73	28	22	17.9
	1937 1,733	373,377	375,647	4,985	8,738	55.6	560,585	166,426	93	5	20	16.9
Texas & New Orleans	1938 4,415	531,856	531,873	2,994	11,861	58.2	786,989	275,739	204	37	43	15.1
	1937 4,420	684,840	685,555	10,583	15,322	55.4	1,054,614	350,038	236	20	32	11.1
Texas & Pacific	1938 1,932	295,836	295,836	1,910	8,715	58.4	561,453	176,922	83	12	93	49.5
	1937 1,944	355,896	355,896	2,257	10,749	64.3	659,137	220,952	92	7	103	51.0

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

1938, Compared with June, 1937, for Roads with Annual Operating Revenues Above $25,000,000

Region, road, and year	Number of freight cars on line: Home	Foreign	Total	Per cent unserviceable	Gross ton-miles per train-hour, excluding locomotives and tenders	Gross ton-miles per train-mile, excluding locomotives and tenders	Net ton-miles per train-mile	Net ton-miles per loaded car-mile	Net ton-miles per car-day	Car-miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles, including locomotives and tenders	Locomotive-miles per locomotive-day
New England Region:													
Boston & Albany.....1938	997	3,168	4,165	4.0	20,868	1,253	410	18.2	314	26.5	3,761	154	45.2
1937	2,106	4,413	6,519	24.1	21,024	1,258	441	19.4	304	23.2	5,299	158	58.8
Boston & Maine.....1938	8,479	6,477	14,956	14.2	25,555	1,865	683	20.3	338	24.2	2,679	95	39.9
1937	8,149	7,603	15,752	13.7	25,809	1,872	701	20.0	397	27.9	3,250	97	45.4
N. Y., New Hav. & Hartf..1938	10,471	8,726	19,197	18.8	27,246	1,887	659	19.5	313	25.3	3,150	92	51.9
1937	8,272	11,945	20,217	10.6	26,567	1,862	685	19.3	370	27.7	3,875	97	64.2
Great Lakes Region:													
Delaware & Hudson.....1938	8,936	2,555	11,491	4.7	29,471	2,009	915	28.4	510	28.6	6,680	103	35.1
1937	8,312	3,878	12,190	5.6	29,747	2,118	999	28.9	624	32.8	8,856	101	44.5
Del., Lack. & Western.....1938	13,729	4,467	18,196	17.9	35,790	2,078	808	23.1	426	27.8	7,897	123	60.1
1937	12,678	6,364	19,042	12.7	32,326	1,969	781	23.0	481	30.7	9,639	126	75.2
Erie (incl. Chi. & Erie)....1938	18,006	10,742	28,748	9.8	43,616	2,642	954	22.3	598	41.4	7,481	91	49.0
1937	15,520	15,402	30,922	5.0	42,706	2,582	985	23.0	697	45.7	9,739	91	60.5
Grand Trunk Western.....1938	5,560	4,062	9,622	17.6	33,490	1,578	527	20.5	353	28.0	3,429	89	67.4
1937	4,675	7,191	11,866	16.2	31,616	1,620	570	20.6	423	31.6	4,847	90	73.2
Lehigh Valley 1938	11,423	8,931	20,354	11.5	45,749	2,576	1,082	27.0	485	28.2	7,421	103	48.4
1937	10,135	10,324	20,459	7.4	40,577	2,362	1,015	26.9	569	31.9	8,981	108	55.1
New York Central.....1938	103,282	51,917	155,199	21.9	36,393	2,110	814	25.4	359	23.9	5,248	97	58.1
1937	91,588	69,469	161,057	13.7	37,533	2,193	873	26.2	491	31.3	7,388	96	77.8
N. Y., Chicago & St. Louis.1938	8,028	5,378	13,406	7.5	40,216	2,060	698	20.5	716	57.2	5,734	81	76.7
1937	6,120	7,718	13,838	3.6	37,954	2,067	770	21.9	886	61.5	7,454	85	91.2
Pere Marquette 1938	10,962	4,529	15,491	4.8	27,383	1,663	609	23.6	335	23.4	2,502	85	61.0
1937	8,028	7,037	15,065	4.8	26,626	1,628	593	23.1	459	32.6	3,341	89	89.1
Pittsburgh & Lake Erie...1938	8,938	8,535	17,473	34.3	50,337	3,550	1,931	46.6	184	6.8	13,744	80	25.3
1937	7,912	10,661	18,573	31.3	47,466	3,205	1,861	48.6	299	9.5	24,685	80	47.9
Wabash 1938	14,686	8,005	22,691	8.3	37,714	1,823	594	19.5	435	35.5	3,994	103	61.8
1937	11,502	8,790	20,292	7.0	36,203	1,741	597	19.6	529	40.9	4,515	101	68.7
Central Eastern Region:													
Baltimore & Ohio.....1938	63,365	18,985	82,350	19.4	29,042	2,061	879	29.1	411	23.3	5,347	129	43.8
1937	57,125	28,419	85,544	11.4	28,305	2,131	963	31.0	566	29.2	7,763	130	58.0
Central of New Jersey.....1938	10,515	9,210	19,725	32.2	28,766	2,384	1,114	33.9	249	12.6	7,167	122	52.1
1937	9,540	9,968	19,508	27.1	26,817	2,192	1,020	31.3	262	13.5	7,503	132	63.0
Chicago & Eastern Illinois..1938	3,526	2,522	6,048	8.1	25,789	1,354	551	24.0	450	27.7	2,926	121	50.0
1937	3,041	3,384	6,425	5.4	27,976	1,494	597	23.9	538	33.8	3,790	118	62.2
Elgin, Joliet & Eastern.....1938	8,792	2,189	10,981	5.0	16,456	1,712	785	34.0	168	8.3	4,144	110	39.8
1937	8,256	5,830	14,086	4.1	17,623	1,990	1,001	39.0	254	10.7	8,413	110	66.7
Long Island 1938	372	2,855	3,227	4.1	5,745	836	321	30.4	73	4.9	681	289	42.0
1937	404	2,928	3,332	3.4	5,505	691	264	29.8	68	4.5	619	324	42.6
Pennsylvania System.....1938	208,276	45,363	253,639	17.8	38,392	2,546	1,050	27.6	305	18.3	7,687	104	46.3
1937	179,857	70,125	249,982	16.5	36,040	2,453	1,104	30.6	472	24.6	11,712	110	66.9
Reading 1938	26,352	7,799	34,151	19.5	26,780	2,060	956	34.6	317	15.7	7,479	129	44.8
1937	21,731	13,097	34,828	7.1	24,826	1,980	953	34.5	404	18.8	9,657	133	60.2
Pocahontas Region:													
Chesapeake & Ohio.....1938	49,551	8,502	58,053	4.0	54,897	3,553	1,893	44.1	726	29.6	14,170	70	50.9
1937	43,542	14,352	57,894	1.6	54,013	3,682	1,972	43.6	923	37.0	17,562	69	59.5
Norfolk & Western.....1938	41,218	4,087	45,305	1.3	47,704	3,051	1,537	38.5	598	25.6	12,496	97	56.8
1937	34,633	6,169	40,802	1.5	52,020	3,417	1,783	41.6	1,000	40.5	18,028	93	73.9
Southern Region:													
Atlantic Coast Line.....1938	16,629	4,381	21,010	24.8	21,335	1,229	402	18.8	312	27.0	1,382	106	52.0
1937	15,564	7,882	23,446	22.1	20,910	1,193	433	19.8	338	26.8	1,690	106	58.8
Central of Georgia.....1938	5,896	4,152	10,048	1.3	21,792	1,128	405	19.6	342	24.8	1,780	115	75.3
1937	3,542	4,651	8,193	2.1	21,725	1,165	452	21.0	494	32.9	2,086	120	76.3
Illinois Central (incl. Y. 1938	35,861	12,882	48,743	16.4	28,003	1,649	631	24.2	514	35.0	3,919	122	52.1
& M. V.).....1937	29,833	19,261	49,094	14.7	25,871	1,506	593	24.2	608	39.3	4,611	123	64.7
Louisville & Nashville.....1938	41,357	7,947	49,304	16.7	26,061	1,586	719	31.3	458	24.6	4,594	119	66.0
1937	31,927	10,710	42,637	12.2	25,195	1,626	762	32.8	681	34.7	5,959	123	81.3
Seaboard Air Line.....1938	11,518	3,581	15,099	3.5	24,066	1,428	516	20.9	486	36.2	1,752	113	55.4
1937	8,910	5,925	14,835	2.3	23,035	1,405	541	21.7	543	37.2	2,017	116	60.7
Southern 1938	21,552	15,053	36,605	11.1	22,162	1,246	468	21.4	451	32.1	2,536	134	52.2
1937	20,587	19,485	40,072	12.2	21,551	1,246	503	22.7	514	33.3	3,202	138	59.6
Northwestern Region:													
Chicago & North Western..1938	40,080	17,629	57,709	8.9	27,583	1,809	633	21.5	258	18.9	1,790	109	40.8
1937	35,388	19,128	54,516	7.3	25,509	1,684	649	23.5	348	22.9	2,286	107	53.6
Chicago Great Western....1938	2,545	3,009	5,554	3.5	29,847	1,664	596	21.3	799	59.2	2,942	119	91.0
1937	2,033	3,809	5,842	2.9	30,915	1,698	608	21.4	860	63.8	3,512	121	96.7
Chi., Milw., St. P. & Pac...1938	47,398	15,748	63,146	2.7	28,258	1,719	668	24.6	380	24.9	2,187	110	59.6
1937	41,560	20,797	62,357	2.7	27,693	1,741	695	25.2	474	30.1	2,654	112	78.0
Chi., St. P., Minneap. & Om.1938	4,150	4,884	9,034	11.0	19,032	1,405	588	25.6	404	24.1	2,286	100	53.2
1937	3,901	4,723	8,624	10.1	18,539	1,397	566	24.7	452	27.6	2,438	97	57.9
Great Northern 1938	37,871	7,275	45,146	8.8	31,692	2,080	899	28.7	387	20.7	2,183	109	40.1
1937	35,964	10,119	46,083	8.7	39,401	2,606	1,245	34.4	711	34.5	4,150	93	54.7
Minneap., St. P. & S. St. M.1938	12,857	2,767	15,624	8.3	19,501	1,145	443	22.4	316	21.4	1,159	99	77.6
1937	11,596	5,800	17,396	3.3	21,468	1,361	577	24.7	431	25.4	1,692	95	88.8
Northern Pacific.....1938	30,997	4,465	35,462	12.3	30,932	1,905	750	23.7	394	24.2	2,189	133	49.9
1937	25,941	5,859	31,800	7.4	30,146	1,930	798	25.2	563	33.5	2,799	134	58.6
Central Western Region:													
Alton 1938	1,552	5,960	7,512	15.3	33,681	1,373	492	23.5	382	27.7	3,323	117	69.9
1937	2,552	6,136	8,688	22.6	33,352	1,402	518	23.4	427	30.2	4,024	119	83.5
Atch., Top. & S. Fe (incl. 1938	76,986	15,486	92,472	10.3	35,086	1,873	582	20.8	387	31.9	2,644	113	79.6
G.C. & S.F. & P. & S.F.).1937	65,426	19,739	85,165	7.4	34,485	1,882	599	21.2	521	42.1	3,160	114	92.4
Chicago, Burl. & Quincy...1938	31,324	14,729	46,053	6.5	28,791	1,687	656	23.7	471	31.0	2,372	110	65.6
1937	25,962	19,752	45,714	6.6	27,486	1,613	677	24.2	575	36.0	2,861	113	80.3
Chi., Rock I. & Pac. (incl. 1938	24,924	13,863	38,787	4.5	27,104	1,503	528	22.7	515	38.5	2,484	116	66.6
Chi., Rock I. & Gulf)...1937	21,779	16,417	38,196	5.0	25,457	1,455	539	23.3	618	43.4	2,802	120	72.9
Denver & Rio Gr. Western.1938	12,962	2,814	15,776	3.5	27,123	1,674	704	25.4	308	17.7	1,892	152	43.8
1937	11,497	3,246	14,743	6.2	25,775	1,583	714	27.8	463	23.4	2,667	150	62.1
Southern Pac.—Pac. Lines.1938	34,782	29,930	64,712	6.4	35,012	2,108	679	20.8	471	37.2	3,484	100	74.3
1937	33,034	34,593	67,627	6.3	33,035	2,062	671	20.7	559	43.8	4,328	102	93.4
Union Pacific.....1938	43,879	15,256	59,135	10.5	40,714	1,940	687	21.5	523	36.9	3,059	114	57.8
1937	37,700	18,932	56,632	11.1	40,445	1,939	721	22.1	683	45.7	3,901	115	72.2
Southwestern Region:													
Mo.-Kansas-Texas Lines....1938	6,094	4,708	10,802	3.5	29,513	1,575	562	22.2	660	49.3	2,060	83	64.6
1937	3,904	7,674	11,578	1.9	30,340	1,673	610	22.5	826	59.2	2,729	81	80.6
Missouri Pacific.....1938	19,949	15,407	35,356	1.9	30,934	1,745	661	23.8	612	40.6	2,964	111	65.7
1937	16,216	27,050	43,266	2.4	30,279	1,732	663	23.5	603	40.5	3,478	111	79.6
St. Louis-San Francisco....1938	19,183	4,506	23,689	6.8	25,120	1,280	508	25.2	488	31.2	2,385	120	63.8
1937	16,914	8,249	25,163	6.1	25,502	1,319	519	25.3	581	38.3	2,890	120	72.7
St. Louis Southw. Lines....1938	2,589	2,370	4,959	3.9	31,204	1,631	525	19.9	813	69.5	2,706	85	76.1
1937	2,359	3,862	6,221	3.1	28,977	1,504	447	19.0	871	82.2	3,201	90	110.5
Texas & New Orleans.....1938	6,964	9,871	16,835	4.0	27,374	1,488	521	23.2	531	39.3	2,082	86	66.8
1937	6,570	13,533	20,103	6.4	28,735	1,549	514	22.8	562	44.5	2,640	84	85.1
Texas & Pacific.....1938	3,673	4,008	7,681	2.3	35,481	1,901	599	20.3	766	64.5	3,052	82	57.7
1937	2,149	6,578	8,727	1.9	33,938	1,858	623	20.6	851	64.4	3,789	80	63.3

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